1997

ANNUAL REPORT

net insight™

Contents

Annual general meeting

The Annual General Meeting will be held on Wednesday, May 27, 1998, at 3:00 PM in the Nordbankssalen, Nordbanken, Smålandsgatan 24 in Stockholm, Sweden.

Only shareholders listed not later than Sunday, May 17, 1998, in the share register maintained by Värdepapperscentralen VPC (Securities Register Centre) are entitled to participate in the Meeting. (Since this day falls on a Sunday, however share registration must take place no later than Friday, May 15, 1998). Shareholders who wish to participate must notify the company not later than Friday, May 22, 1998, 4:00 PM. Notification should be made to: Net Insight AB, Ingenjörsvägen 3, SE-117 43 Stockholm, Sweden. Notification can also be made by telephone +46-8-449 22 30, or fax +46-8-449 22 40, or alternatively on the Internet (www.netinsight.se).

Dividend
The Board of Directors recommends that the Annual General Meeting approve a dividend of SEK zero (0).

Financial calendar
for Net Insight AB

Interim report for January - June 1998	September 1998
Press release of unaudited figures for 1998	March 1999
Annual report for 1998	May 1999

Summary of 1997

Important events during the financial year

- In the year under review, development costs, stock issue expense, and start up costs together with the creation of a strategic plan amounted to SEK –31.6 million.
- Net Insight received SEK 35 million from a directed share issue in early 1997 and a further SEK 72.8 million from a rights issue in November 1997.
- The company's activities focus on developing a system to improve capacity and quality of data, voice and video traffic in high-capacity networks.
- The company's operations are in a start-up phase and have focused on product development during the period.
- The recruitment of key personnel during the year ensured a higher development tempo. As of December 31, 1997, the company had 30 employees.
- A preliminary design of the hardware (switch) to be used in field tests was finished at year end.
- Successful laboratory tests have been conducted with a rudimentary version of the company's product.
- A statement of intent has been signed with an operator.
- The consulting firm Bain & Co. of San Francisco has defined target markets and market potential.

Important events in early 1998

- Beta products were tested and demonstrated for potential customers and partners in the company's laboratory (February).
- Company management was strengthened by the appointment of Bengt Olsson, as the company's Managing Director. Bengt Olsson has many years' experience in management and sales.
- Lars Kahn took up duties in the beginning of 1998 in a newly established position with responsibility for the European market and for leading standardisation work.
- As of March 31, 1998, there were 36 employees, including 3 degree candidates from the Royal Institute of Technology (KTH) in Stockholm.
- On March 26, 1998, Net Insight concluded a contract with Vasa Läns Telefon of Finland for a test project for a city network in October 1998.
- Net Insight is currently negotiating four more test projects in Europe and with an operator in North America, with whom a statement of intent was signed on January 30, 1998.
- The company has initiated standardisation of DTM technology within the framework of the European Telecommunications Standards Institute (ETSI).

Net Insight in brief

Net Insight is a network company undergoing rapid expansion. Net Insight's business concept is to develop and market cost-effective communications solutions based on dynamic synchronous transfer mode (DTM) technology that give customers and partners strategic and economic advantages.

Net Insight was founded in November 1996. During 1997, the company focused on building an organisation that could commercialise the DTM research project. This project had been initially run by Ericsson for several years at the end of the1980's and subsequently by the Royal Institute of Technology (KTH) in Stockholm since 1990.

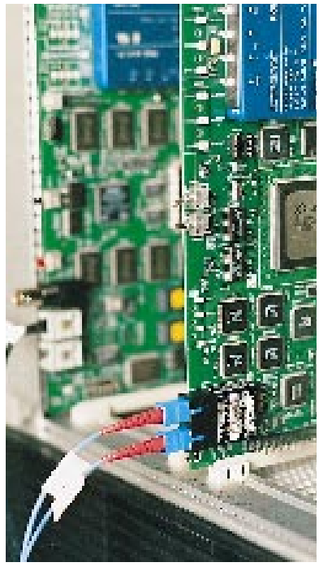
DTM technology can be applied to a wide market. Together with an American consulting firm specialised in data communications and following customer discussions, Net Insight has defined a strategy to best establish itself in the marketplace. Internet traffic (IP traffic) is the company's primary business area. The first generation of products (NI1000) consists of a switch optimised for IP traffic, a number of connection cards that can communicate with their surroundings, such as servers, routers and other network technologies, and a system to administrate the network. The target market is city networks. Improved access technologies, new applications and strong growth in the number of Internet users have led to a need for large capital investments in network equipment in the next few years. In addition to this business area, Net Insight will also penetrate several specific market niches for which the company's technology and first product line are particularly suited. One such area is the private networks for different production and distribution companies in the entertainment industry.

The company's products have been tested extensively in the company's laboratory. After the summer, they are expected to be ready for external testing and evaluation with customers in a commercial environment. The company anticipates that the first product line will be ready for delivery in the last quarter.

The number of employees increased to 29 by the end of the year. The business is run from company headquarters in Marievik outside Stockholm. A presence outside Sweden, directly or indirectly with partners, is a necessity in the long run. An office in North America will be opened to market the company in America and to provide service for one or two customer relationships in the near future.

As of March 1998, Net Insight was currently negotiating four test projects in Europe and two in North America. The goal is to carry out at least one test project this year in order to establish two customer relationships by year-end. The number of customers will be limited to a few up to summer 1999. The marketing division will therefore be small in relation to the development division during this period.

The company had more than SEK 80.7 million in liquid assets at year-end. Costs for product development, joint customer projects and marketing to several customers are anticipated to result in new capital requirements by early 1999 at the latest. The test projects scheduled for 1998 will provide a minor revenue depending on their type, extent and strategic value for Net Insight. Sales and marketing efforts are not expected to give results until next year. No forecast is provided for the present year.



Chairman's statement

The foundations for expansion have been laid

1997 was an eventful year for Net Insight. During the year we created a platform for the development of the first product line. This has primarily involved recruitment of highly qualified technicians, which has ensured an effective product development process and strengthened the company's patent protection. The organisation's ability to meet, and in some cases even exceed, development goals has been exceptionally good. This is important, especially considering that time-to-market is crucial. An explicit element of our activity base is the pursuit of effective product development by means of strict internal project management, clearly identifiable milestones and disciplined reporting routines.

Adaptation to customer needs is a central component in our market strategy. Therefore, we will pursue an ongoing dialogue with several operators in different geographical markets and establish strategic co-operation with several of them in order to ensure that we develop products that are demanded by the market.

A number of customer discussions were initiated during the year in order to obtain a sufficient decision making basis for the positioning of Net Insight's first prod-uct and in order to identify suitable target markets. Towards this end, the Board has engaged an American consulting firm in San Francisco to undertake a comprehensive study of suitable market strategies and pilot markets.

For shareholders, 1997 has meant that we have turned to your help on two occasions to finance our activities. The latest share issue in November provided us with sufficient resources to perform the planned customer tests, follow up development and begin marketing the first product line. Additional capital will be required, which means several more new issues. The first will probably be already this year. This should enable us to intensify marketing efforts during 1999. The goal is to obtain a listing for Net Insight shares on the stock exchange by 2000 at the latest. However, a market listing can take place earlier.

The first phase of the company's development has been completed. We have reached a critical level in product development, reinforced patent protection and begun negotiations with potential customers and partners. A strong involvement, exceptional work efforts and extensive developmental work have placed the company today in a competitive position for 1998. For some time now Net Insight has tested an early version of the first product line in the company's laboratory. This has created not only strong momentum in the organisation but, perhaps above all, it has resulted in attention and interest from several potential customers and partners.

It is with great satisfaction that I, on behalf of the Board of Directors, can state that the foundations have been laid for the future and that we can confidently pursue the work that is necessary for Net Insight to become a profitable company and thereby a good long-term investment for shareholders.

Stockholm, March 1998

Ulf Lindgren
Acting Chairman of the Board for 1997

Managing director's statement

The commercial phase approaches

"My primary task is to oversee commercialisation of this work, which in the short term primarily means concluding the first test contracts during the spring and at the same time building an organisation that can begin to deliver concrete customer orders by the end of the year."

I have recently assumed the position of Managing Director of Net Insight at the time of writing. Consequently I have had only a limited possibility to thoroughly familiarise myself with the company. However, there is no doubt that Net Insight is a well-run company, which in a short time has succeeded in building a well-functioning organisation, especially as regards technology development. The company is in a developmental phase that includes further validation and quantification of customer needs. This will take place initially in the company's laboratory and, later in the year, also externally with a couple of strategic customers. At the same time we will finish development of the first product line utilising the valuable feedback from potential customers. Our goal is to deliver the first systems to strategic customers during the last quarter of this year. My primary task is to lead commercialisation of this work, which in the short term primarily means concluding the first test contracts during the spring and at the same time building an organisation that can begin to deliver concrete customer orders by the end of the year.

This will be exciting work. Net Insight is in a very attractive sector with a high underlying growth rate. The need for wideband capacity is driven by new applications and new users. E-mail and web sites on the Internet (www) create entirely new communication needs, a fact that is changing life for many, not the least for the operators. The next revolutionary application (called the "killer application") is expected to be audio and moving images on the Internet. These changes involve even further demands on capacity but, above all, they place entirely new quality demands, a fact that compels new investments. The last hundred metres of telecom line to users is a congested area. Contemporary modem technology and most company networks need to be improved or replaced. Nonetheless, an increasing number of user or access technologies are under development, for example, improved traditional solutions for telephony (ADSL, etc.), wireless solutions or improved company networks (Gigabit Ethernet). The combination of exponential growth in the number of Internet users, increased content and improved access means that the capacity of the entire network must be expanded to avoid new bottlenecks.

Our business concept has been validated and strengthened during the year. The present situation and expected development compel operators to test new solutions. The fibre-based solutions have shifted the bottlenecks to the nodes. Traditional network solutions have been adapted to data communication and telephony and are less suited for high-quality audio and video. Increased traffic volume, the integration of audio, video and information and increased competition have led operators to make entirely new demands in the procurement of network equipment. DTM and Net Insight's technology have a strong competitive position in comparison with other technologies, initially due to cost advantages in transmitting common data information in the network, but also due to cost savings in operation and maintenance. However, the company's primary sales argument is based on income generating factors such as higher service quality, increased flexibility in expansion possibilities (degrees of scale) and differentiated charging functions.

Against this background and the background of ongoing customer discussions, it is our firm belief that the time is ripe for launching our first product line. The target market is city networks, i.e., networks that distribute traffic between different accesses from users and transport networks. The total market potential of this segment is expected to increase to more than SEK 200 billion per year by the turn of the century.

A central element of our strategy is to enter into strategic alliances with established companies in the data communication and telecommunications industries. This is to improve Net Insight's market channels and to facilitate co-operation with other technologies.

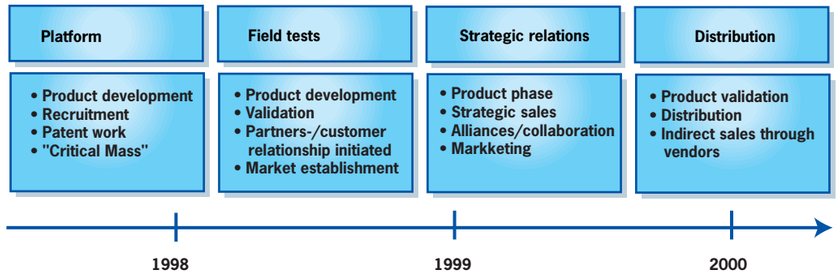
Competent personnel are required to successfully develop competitive and distribute them in the market. Net Insight is an attractive employer and at the time of writing we have a staff of 36, most of whom have exceptional academic and professional qualifications. In the future we will continue to pursue technical development mainly in Sweden and expect to have 60 employees by the end of the fiscal year. However, a market presence in other countries is necessary for success. Initially this will be a sales office, which is being established on the American West Coast. The need for a large marketing and sales organisation is limited since we expect to have only a few customers in the first years.

The goal is to begin the scheduled customer tests after the summer. The results of marketing efforts are expected to show in the order books and invoicing first in 1999.

It is with great enthusiasm and dedication that I assume the operational responsibility for Net Insight.

Bengt Olsson
Managing Director
as of March 1, 1998

Business concept and strategy



Net Insight's development can be divided into a number of phases - from the development of a business concept to the launch of the first product series.

Business concept

The business concept is to develop and market a cost-effective communications solution based on dynamic synchronous transfer mode (DTM) technology that gives our customers and partners strategic and economic advantages.

Business development

Commercialisation of products based on a new technology such as DTM requires going through a number of phases – from the development of a business concept to the launch of the first product series.

Field tests

In the networking industry, sales cycles of one to two years are not unusual, since customers conduct extensive tests before deciding on major investments. Since Net Insight is a newly formed company whose products are based on a new technology, an operator will require extensive field tests and evaluations of both the technology and of Net Insight as a company before it decides to undertake large capital investments based on Net Insight's products.

Net Insight intends to conduct field tests together with one or more operators in order to create a number of strategic customer relationships. These will be very important for the future market acceptance of Net Insight's products.

Standardisation and licensing

An important factor for Net Insight's success is whether it will succeed in developing DTM into a future industry standard. Work has therefore started with standardisation organisations to create a standard around the DTM technology.

If other companies also work with spreading the DTM technology, this will increase rather than diminish Net Insight's possibilities for commercialising its products. An operator will normally want to have access to a second source.

To quickly obtain a sufficient diffusion of DTM-based products, the DTM technology will have to be licensed out to external manufacturers. Licensing will take place in market and/or product segments where Net Insight's competitors have significant economies of scale or marketing advantages. Internet operators increasingly consider the IP interface as a de facto standard. Since the different types of underlying technologies for switching and transmission are interchangeable, DTM has a good chance of entering the market.

Subcontract work

Initially, Net Insight will concentrate on systems development in combination with marketing and sales. Net Insight intends to acquire subcontractors and partners for laser technology, manufacturing and assembly, and for service.

Strategy

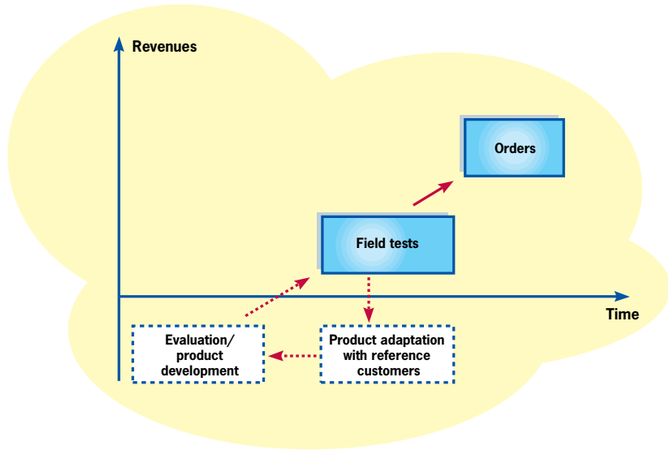
Net Insight intends to conduct field tests together with one or several operators to create a number of strategic customer relationships.

Net Insight's goal is to develop and market network solutions capable of meeting the great need for cost-effective communication in high-capacity networks. Strong growth in shareholder value will be achieved through rapid future growth with good profitability. To realise this goal, Net Insight has prepared a detailed strategic plan. This work was done together with the network/telecommunications group of the consulting firm Bain & Company, Inc., ("Bain & Co.") of San Francisco, US. It defined two market segments: city networks and private networks, for large cities and regions with a large need for visual communication.

Net Insight's strategy will be implemented through four core activities.

- Development of DTM-based products and systems with efficient support for Internet traffic. DTM has shown itself to be a very suitable technology for cost-effective communication in high-capacity networks. Net Insight will initially focus on products for aggregating networks for the transport of IP traffic. By maintaining a high degree of innovation, Net Insight will remain the leading company in DTM technology
- Protection of developed products with patents. Patents are not a prerequisite for Net Insight's business, but they will initially constitute a priority area to strengthen the company's position vis-à-vis its competitors as well as to increase the interest of external parties to form strategic alliances with Net Insight. However, patents are a prerequisite for establishing licensing agreements.
- Co-operation and field tests together with a few strategic customers. By co-operating closely with a few, select customers, Net Insight will be able to better meet customer needs. In this respect it is decisive that Net Insight successfully establishes agreements with operators regarding field tests and evaluation of Net Insight's products. This should also facilitate Net Insight's marketing.
- Conclusion of co-operation agreements and alliances with strategic partners. Using co-operation agreements and alliances with strategic partners, Net Insight licensing of Net Insight's products will open new sales and marketing channels giving the DTM technology sufficient diffusion.

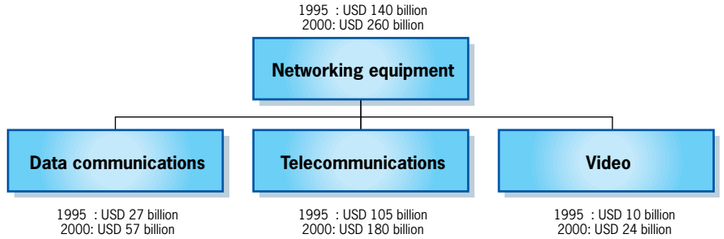
Net Insight intends to conduct field tests with one or more operators to create several strategic customer relationships.



Organisation

In order to succeed with this strategy, Net Insight must be able to attract and retain qualified technicians, marketing staff, executives, board members and advisers.

Net Insight's organisation is divided into technical development, marketing and administration. As of March 30, 1998, Net Insight had 36 employees. The company's activities are run from its Stockholm headquarters, but a US subsidiary with a sales office in California is being formed.



Market segment

The global market for networking equipment in 1995 amounted to approximately USD 140 billion. According to the market research company Dataquest, it is expected to reach about USD 260 billion per year by 2000. The network market can be divided into segments or sub-markets for data communications, telecommunications and a pure video network (mainly cable TV network). Currently, these distinctions are becoming increasingly blurred, especially between data communications and telecommunications. This is due to globalisation, the expansion of the Internet and the integration of audio, video and data. Future networks will not be designed for single applications such as telephony, but instead will be capable of handling an information mix comprised of audio, video and data. This development threatens the operator's core business in the traditional segments, at the same time creating new business possibilities in other segments. Capital investment in network equipment is required to defend current business and expand. Industry analysts estimate that current capacity in Sweden must be expanded by a multiple somewhere in the range of 5,000 to 10,000 when high quality video is introduced into the networks. The Swedish market is relatively well developed, which means that other countries must expand to an even greater extent. The expected market growth for network equipment suppliers should be viewed against this background of applications spurring development. Certain market segments are expected to achieve a 50-percent growth rate per year in the coming five-year period.

Increased integration and new distribution channels for traditional information will alter the competitive situation, especially for telephony operators. The strong growth of fax via the Internet is the first sign of this paradigm shift. The next step should be telephony over the Internet, the "IP telephone". The development is already explosive and threatens the telephony operators' core business. It compels new investments and innovations in services in order to survive.

Networks

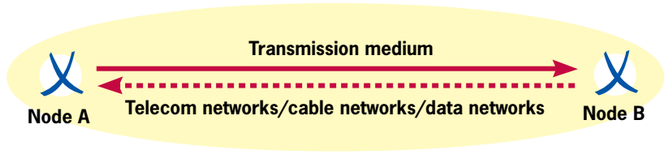
A network transports information and consists of a number of nodes and intermediary connecting links. In its simplest form a network consists of two nodes and a connection that links these two points (point-to-point). The links between different nodes are called transmission media and usually consist of fibre-optics and copper wiring, but coaxial cable and radio links are used. Various types of networking equipment are also required to operate and administrate the transmission. These can be switches, hubs and routers. In order for these different pieces of equipment to communicate with each other, there must be a communication protocol, such as DTM, ATM or Gigabit Ethernet.

Network topology

Topologically networks can be roughly divided into access networks, transport networks (backbones) and city networks.

Access networks

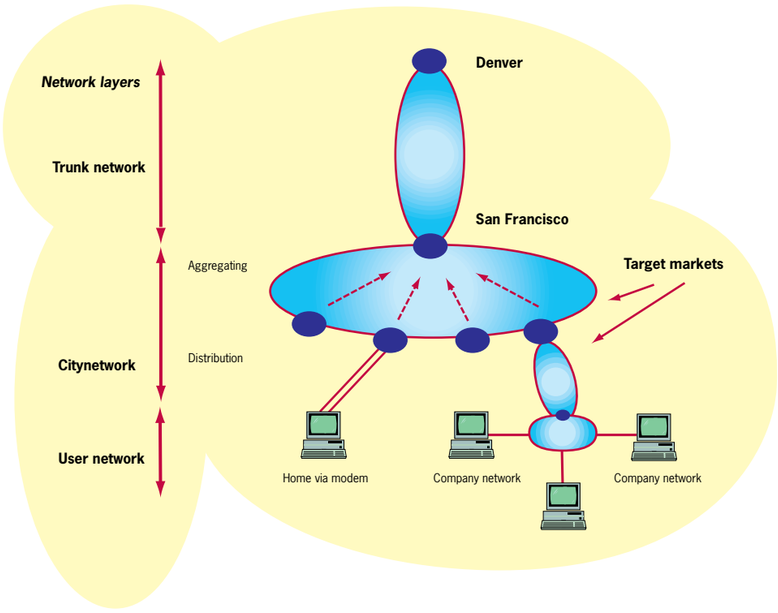
Access networks are closest to end users, connecting individuals or smaller company intranets (LANs). A company network is usually made up of various computer equipment connected together in a department, a building or a block. An individual is usually connected via a modem. Characteristic features of access networks are that the transmission medium is usually copper wire, the number of connection points is high and traffic volumes are low.



A network consists of nodes and connections through which information can be transported.

Transport networks

Transport networks handle aggregated traffic within larger networks and between different networks. Characteristic features of transport networks are that the transmission medium is increasingly optical fibre, the number of connection points is few and the capacity is high.



Net Insight's target markets will initially consist of the parts of the networks that deal with aggregated traffic in city networks, and private networks.

City networks

The city network is found between the access network and the transmission parts. A city network handles mainly aggregated traffic from access to transmission and distributes from transmitter to user.

Internet

The Internet is a global public network which during the last three to four years has undergone a very strong expansion. The common protocol (Internet Protocol, or IP) makes the Internet universal and independent of underlying physical network. If the underlying connection technologies support IP, then the different networks can be tied together. One of the reasons the Internet has become so widespread is that the Internet creates a single public network. The real breakthrough came in 1993-94 with the WWW (World Wide Web), or home pages. The exponential growth in the number of users and the creation of new services have placed increased and changing demands on the underlying connection technologies. Apart from the demand for increased capacity, support for multimedia and multicast (from one to many) is required.

Target market segment

Net Insight has chosen a strategy to establish itself in the market that focuses product and market development on the network area that handles aggregated traffic in city networks (municipal WANs), that is the traffic that arises between final users and the typical transport networks. There is a rapidly growing need for cost-effective handling of aggregate traffic as a consequence of the constantly increasing traffic volume. This is due to the exponential growth in the number of users, new, improved accesses and changed quality demands, among other factors. DTM and Net Insight's first product reveal clear competitive advantages in comparison to other technologies. This represents an excellent opportunity for Net Insight to establish itself in the market. The market amounted to USD 12 billion in 1995, a number which is expected to increase by an average of 20 percent annually.

Net Insight intends to broaden its marketing efforts in the near future, most likely with a partner, to include even the transport networks (WANs and backbones). However, Net Insight must become more established as a company and DTM more widely accepted as a technology before the company can successfully supply equipment to the major transport networks. The procurement process in this segment is significantly more comprehensive, placing high demands for stability and reliability on both products and suppliers.

Customers

The customers of the suppliers of networking equipment are called operators. These can be operators that build new networks, that have to expand existing ones, or that have access to surplus fibre-optic capacity. The highest market growth lies within the Internet segment, where various providers of services are planning substantial investments in new networks. Also within the market segment for traditional telecommunications, there are considerable investments under way due to deregulation, reduced margins within the core business, and for the purpose of reaching new business segments that integrate audio, video and data in one and the same network. Even if the relative growth figures are lower than in the data communications industry, it is an interesting segment as the absolute turnover is so much larger.

Net Insight's strategy to establish themselves in the market means that the first customers will be operators that handle aggregated traffic between end users and the transport parts of the network (city networks or municipal WANs). The type of customer varies depending on the geographical market that is being penetrated. In North America, specialised Internet operators are active in defined market segments. They may be pure Internet service providers (ISP) or competitive access providers (CAP). Short lead times for decisions and a greater interest in new solutions are two advantages of working with operators whose primary interest is to provide Internet. The same applies to explicit niche projects undertaken together with an operator and an end customer. In Europe, the customer is probably a traditional telecommunications operator that also provides Internet services. The current deregulation offers interesting opportunities for new players to challenge old monopolies. This creates business opportunities for Net Insight, since a new operator who wishes to establish himself in the market generally has a greater incentive to test new solutions than the company that already has the majority of the market. The increasing competition is affecting the whole European industry and is expected to result in increased investment.

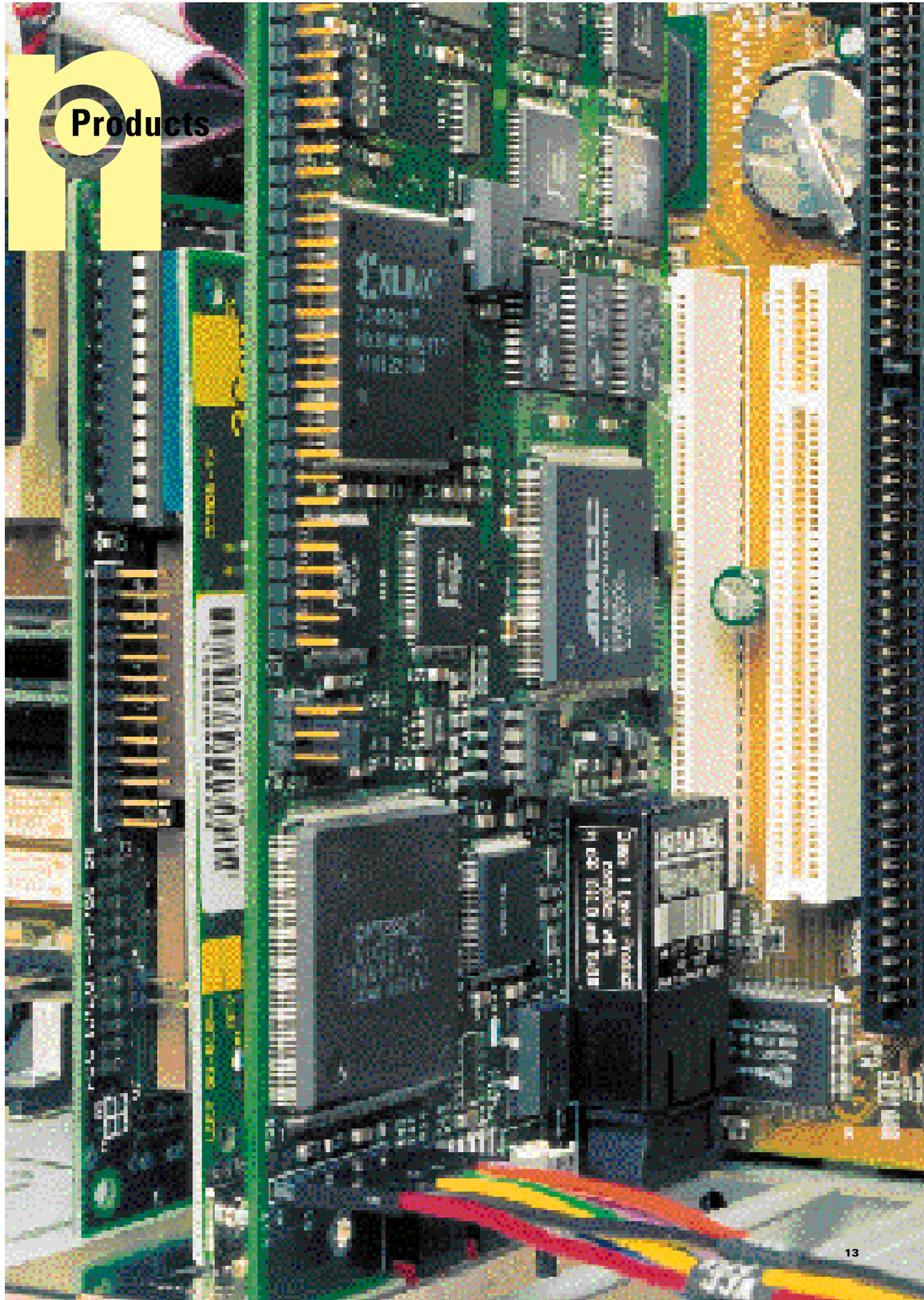
Customer status

Crucial for the company's customers are the price and performance of a mix of audio, video and data, the cost of operation and maintenance, as well as costs associated with a future expansion of the capacity of the network.

At the time of writing, Net Insight is well into negotiating five test projects in Sweden and two in North America. Over the past year we have had a dialogue with several customers, with the purpose of putting the customers and their needs in the focus of our market and development strategy. Through a close dialogue with one operator specifically, Net Insight has obtained valuable feedback from the customer base. During the spring, Net Insight is planning to formalise some strategic relations in order to conduct various test projects together with customers.

Our objective is to have established at least two customer relationships, by the end of the year. Although the number of customers is very large in the long term, in the short term Net Insight will only have a few strategic customers. This is primarily due to the fact that Net Insight is still in a start-up stage and only has the resources to handle a few customers successfully. Since the company as well as the DTM technology is new, the lead time from the first customer contact to the placed order can be relatively long. This is particularly so in the pure transport networks where the time between the first contact and the placed order can be up to two years. The first customer relations will be of a project nature and involve clearly defined commitments. The flexibility and efficiency of the company is crucial when adapting field tests and product specifications, among other things, together with the customer. It is important that the company can handle these initial and critical customer contacts successfully. The satisfaction of the customer is therefore superior to all other goals, and this means that every customer shall identify Net Insight with reliability, customisation and technological leadership. Net Insight aspires to establish long-term relations with customers, where the company is perceived to be a stable and reliable partner.

Products



Products

Net Insight will offer its customers various product lines which provide cost-efficient network solutions requiring high capacity as well as quality.

Net Insight's products are based on the communication protocol DTM (dynamic synchronous transfer mode) .

Net Insight's first product line, with the working title NI1000, is intended for city networks and will contain:

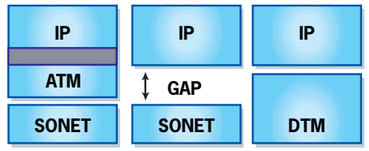
- switches with support for IP (transport and connection)
- NICs (network interface cards) for connection to various data servers
- access equipment for existing networks
- management routines for increased control of the network and its services

The base component in the product line will be a very powerful switch that handles aggregated Internet traffic in city networks between end users and transport parts in the network. The switch will supplement and reinforce surrounding equipment such as routers and servers. NI1000 will have efficient support for the integration of real-time video with other types of traffic.

Since the target market is city networks, the first generation of products (NI1000) will be designed for short distances. In order to be able to communicate with the surroundings of the network, there will be connection ports to local data networks (initially Fast Ethernet and in the long term Gigabit Ethernet), and to surrounding transport networks, such as SONET/SDH. During 1999, the next product generation is planned, which will involve a considerably more powerful switch (32 ports with 2.5 Gbps each) and which will have support for longer distances, for instance by wavelength division multiplexing (WDM).

Customer value

The need for improved capacity as well as quality is driving the operator's investment in networking equipment. The increasing traffic volume and the integration of primarily audio and data, but in the long term also video, result in changes in the specification of requirements of a network. The Internet operators will encounter problems due to the fact that the Internet's protocol (IP) has not been developed to handle video, among other things. There is thus a need for additional support in order to be able to successfully provide these services. It is an explicit requirement of the operators' to be able to offer differential pricing for different levels of quality (Quality of Service).



DTM gives IP the supplementary support required for high-quality services containing audio and video.

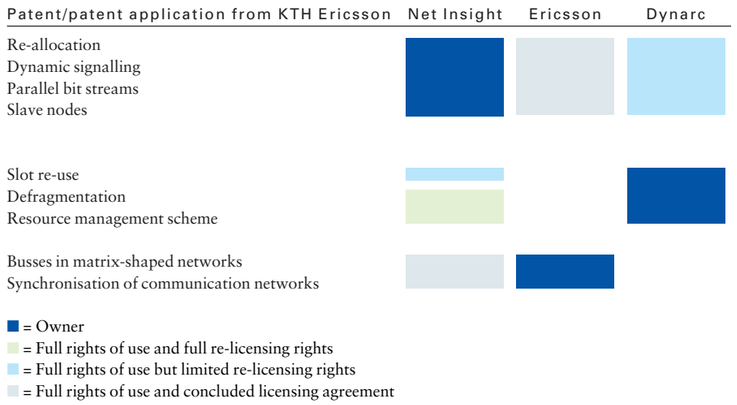
The customer utility of Net Insight's product series can be summarised as follows:

1. Increased revenue due to new services requiring high quality
2. Increased revenue due to increasing volumes
3. Cost savings through lower operation and maintenance costs
4. Increased margins through a higher degree of utilisation of the network and reduced investment

DTM gives IP the required support in order to be able to offer the services that require high precision in time (video etc.). Thereby, conditions are created for new services and new revenue. With DTM one can also re-allocate transmission capacity between different users according to need, which considerably increases the possibilities for the network operator to offer differential pricing in a cost-efficient manner. The competitive capacity utilisation of the NI system and the economical scalability towards higher transmission capacity are two other crucial concepts for the customer. That the systems in addition are relatively autonomous means that they do not require as many staff for operation and maintenance as would similar competing systems. These costs form a large part of an operator's total costs (up to 60 percent).

Patents

Net Insight's patent portfolio consists partly of the base patents and/or patent applications that are held with Ericsson and Dynarc (these derive from research conducted at KTH), and partly of the company's own patent applications that protect its products. Those that derive from KTH consist of nine base patents and filed applications that aim to protect the DTM technology. Net Insight owns one patent and three applications, Ericsson owns two, and Dynarc owns three of the nine patents/patent applications. Net Insight holds all these patents/patent applications in usufruct (see the table below).



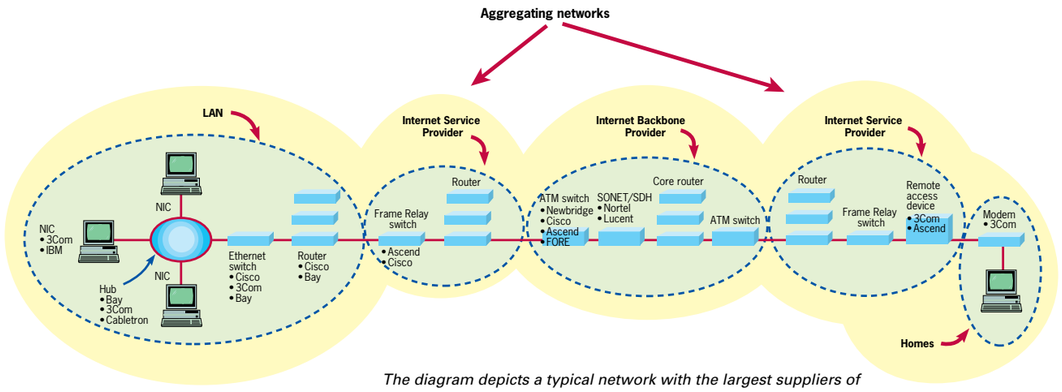
In addition to these, Net Insight has filed six more applications in order to protect the company's technology. Furthermore, four patents/patent applications have been filed with the Patent Corporation Treaty ("PCT"), in order to facilitate the procedure of filing applications in several countries at the same time. Thus, all in all, Net Insight owns one granted patent and nine patent applications.

Competitors

The competition in the networking industry is intense. The suppliers of equipment to the networking industry are mainly 10 large, established companies, originating in the rapidly expanding data communications industry or in the more traditional telecommunications industry. These companies are characterised by well established customer relations, stable products with a wide product range, and good continuity as regards both upgrades of old products and launches of new ones. However, a distinguishing characteristic of the industry is that innovations and improvements are increasingly coming from start-up companies, mainly US ones that have been started by individuals with experience in the computer industry or in the data communications sector. The difficulties in distributing the products to the market mean that many choose to merge with larger companies that already have established distribution channels. An explicit part of the business strategy of the dominant US companies is to acquire smaller companies in the technology field. The business focus is more towards the implementation of acquired products than towards groundbreaking research and development. During the last two years, many of the small new companies have been purchased, and this has resulted in a considerable appreciation of the value of such small companies. Most of these companies had not even reached the commercial phase but were still in the test phase. Net Insight's competitors are primarily two established companies with products based on the Gigabit Ethernet, ATM and frame relay technologies. Operators using ATM and frame relay-based systems also need equipment to handle the physical (fibre) level, generally SONET/SDH equipment. Net Insight's product integrates these two functions, which means that an operator only has to purchase one system instead of two. Thus, Net Insight is also competing with suppliers of SONET/SDH equipment, the largest market of which is the heavier transport parts of the network. City networks constitute Net Insight's target market, and these are not as important a segment for the suppliers of SONET/SDH equipment. Of today's established technologies, it is actually only ATM that in a satisfactory manner can handle aggregated traffic. Frame relay has problems with the ever-increasing capacity requirements and the increasing traffic volume. Hence, due to the severe competition, it is being replaced in the heavier parts of the network and is now primarily found close to the users. Gigabit Ethernet functions more as an interconnect solution for LANs. DTM displays clear competitive advantages in city networks in relation both to ATM and Gigabit Ethernet.

Net Insight has an advantage over more established companies in the development of products based on DTM. Apart from Net Insight, only Ericsson and Dynarc have a deeper insight into DTM. Net Insight and Dynarc both compete with and complement each other. They both develop DTM products and have, together with Ericsson, access to the results of research at KTH, as well as the patents and patent applications that have resulted from this research. In order to succeed in the long term, it is crucial that more companies develop or sell DTM products. Thereby, DTM would obtain increased legitimacy and thus facilitate the marketing for Net Insight. A trend that favours new solutions has become increasingly visible over the past year; namely, the changing view of the operators as regards the belief in one unique and universal technology. The substantial investments made in Internet capacity have resulted in purchasing behaviour becoming more and more fragmented as regards the choice of the underlying technology. Instead of the belief in a single base technology, it is presumed that the future will hold several technologies of the type DTM, ATM and Gigabit Ethernet. The important thing for the operators is that they support the Internet which connects the various technological solutions.

Net Insight has obtained comparative advantages from the localisation of product development in Sweden, where the industry is not as overheated as it is in the US. A lack of qualified manpower is often referred to as an obstacle to expansion in the data communications industry. In Sweden the supply of manpower is relatively high, and business can be run at a comparatively low level of cost. The purpose of development for most of the competing companies is to improve the solutions and the technologies originating in traditional telecommunication. These were originally optimised for text-based data traffic and are not appropriate for information containing a mix of audio and video. The product development is focused upon improving the quality and capacity of these technologies. The disadvantage is that this requires more computer power. The dependence of the equipment on computer power creates costly systems with complex upgrading possibilities. Net Insight's primary advantage is that the technology has been developed for a mix that is dominated by audio and video, and not only by text messages. This results in considerable cost advantages and quality gains, which will increase along with an increasing content of, primarily, video.



The diagram depicts a typical network with the largest suppliers of networking equipment in each respective market segment.

Share capital

SHARE CAPITAL AND OWNERSHIP

Share capital

As of December 31, 1997, the share capital of Net Insight amounted to SEK 1,007,844 distributed among 1,343,806 shares, of which 180,000 shares are series A shares and 1,163,806 are series B shares. Each share has a par value of SEK 0.75. All shares carry equal rights regarding participation in the company's assets and profits. Each series A share carries 10 votes and each series B share carries one vote.

Share capital distribution, as of December 31, 1997

Shareclass	Number of shares	Number of votes	capital	Number of votes
A shares	180,000	1,800,000	13.4%	60.7%
B shares	1,163,806	1,163,806	86.6%	39.3%
Total	1,343,806	2,963,806	100.0%	100.0%

Changes in share capital

Year	Transaction	A shares	B shares	Number of shares	Par value (SEK)	Share capital (SEK)
1996	Formation of company	9,000	12,000	21,000	5,00	105,000
1997	New issue	9,000	47,000	56,000	5,00	280,000
1997	Bonus issue	9,000	47,000	56,000	15,00	840,000
1997	20 for 1 split	180,000	940,000	1,120,000	0,75	840,000
1997	New issue	180,000	1,163,806	1,343,806	0,75	1,007,855

Authorisation of future new issues

At an Extraordinary Meeting of Shareholders of Net Insight on October 17, 1997, the Board of Directors was authorised, until the following Annual General Meeting, to decide on the issue of a maximum 130,000 new series B shares. Such a decision can be made on one or several occasions within the above time period.

An issue shall – without regard to the preferential rights of shareholders - be directed to non-Scandinavians, preferably to US institutional investors and individuals, who either will become members of Net Insight's Board of Directors or of the Board of any of Net Insight's subsidiaries or who in other ways agree to act in the interests of the company in a strategic way.

The new shares shall be issued at a price corresponding to the market value of the shares.

The Board of Directors stated the following reason for the departure from the preferential rights of shareholders: The US constitutes Net Insight's largest commercial market. Therefore, it is important to offer US investors the opportunity to subscribe to shares in the company on market terms similar to what is common in other high-tech companies with registered offices in the US. It is also important that the Board of Directors can provide definite offerings of share subscriptions without the time limit and, to some extent, without the element of uncertainty associated with Annual General Meeting resolutions.

Ownership

Ownership in Net Insight, according to the VPC (Securities Register Centre) public share register as well as the public nominee register, as of December 31, 1997, is presented in the two tables below.

Shareholders as of December 31, 1997	A shares	B shares	Capital	Votes
Lars Gauffin	60,000	75,780	10.1%	22.8%
Per Lindgren	60,000	72,743	9.9%	22.7%
Christer Bohm	60,000	72,265	9.8%	22.7%
AB M S Kobbs Söner and pension fond		94,100	7.0%	3.2.%
Wikow AB		52,460	3.9%	1.8%
Handelsbanken Småbolagsfond		39,400	2.9%	1.3%
S-E-Bankens Teknologifond		28,800	2.1%	1.0%
Barbro, Gustaf, Henrik and Petter Wingstrand		28,800	2.1%	1.0%
Ulf Lindgren		26,780	2.0%	0.9%
Banque Edouard Constant		26,260	2.0%	0.9%
Lage Jonason and family		24,500	1.8%	0.8%
Domaren i Göteborg AB		24,500	1.8%	0.8%
Försäkringsbranschens Pensionskassa		17,000	1.3%	0.6%
Wasa Livförsäkring		16,200	1.2%	0.5%
Dan Walker		15,600	1.2%	0.5%
Aktiefond Börsveckan		13,000	1.0%	0.4%
Other shareholders (approximately 1,120)		535,618	39.9%	18.0%

Shareholding, number of shares	Number of shareholders	Number of shareholders	Number of shares	Percentage of share capital
1–500	933	82.1 %	139,339	10.4 %
501–1,000	89	7.8 %	66,630	5.0 %
1,001–10,000	94	8.3 %	273,749	20.4 %
10,001–100,000	18	1.6 %	463,300	34.5 %
100,001–	3	0.3 %	400,788	29.8 %
Total	**1,137**	**100.0%**	**1 343,806**	**100.0%**

Warrants and other option agreements

Net Insight is of the opinion that it is of vital importance to the success of the company and thereby to the benefit of shareholders that Net Insight is able to attract and retain qualified personnel in all areas of the company's operations. For this reason Net Insight has introduced a warrant programme to enable key personnel to eventually become shareholders in the company. The employees of Net Insight, strategic consultants to the company and Board members may acquire warrants on market terms. Net Insight has issued two series of warrants. Total dilution from the two warrant programmes amounts to approximately 9.4 percent of the number of shares and approximately 4.5 percent of the number of votes.

At the Extraordinary Meeting of Shareholders on March 12, 1997, Net Insight issued a subordinated loan with detachable warrants comprising 60,000 warrants. These warrants each carry the right to subscribe for series B shares during the period January 1, 2000, to June 30, 2000, at an issue price of SEK 113.75 per share adjusted for an issue of new shares.

At the Extraordinary Meeting of Shareholders in Net Insight on October 17, 1997, it was decided that the company shall issue a subordinated loan in the nominal amount of eighty thousand kronor (SEK 80,000) through the issue of a promissory note with 80,000 detachable warrants. These warrants each carry the right to subscribe to series B shares during the period January 1, 2000, to June 30, 2000, at an issue price of SEK 950 per share. These warrants will be sold on market terms to employees of Net Insight, strategic consultants to the company and Board members. The company's three founders have issued a total of 30,000 call options to Ulf Lindgren, Bernt Magnusson and Lage Jonason. These call options each carry the right to acquire a series B share during the period January 1, 2000, to March 31, 2000, at an issue price of SEK 600 per share.

Dividend policy

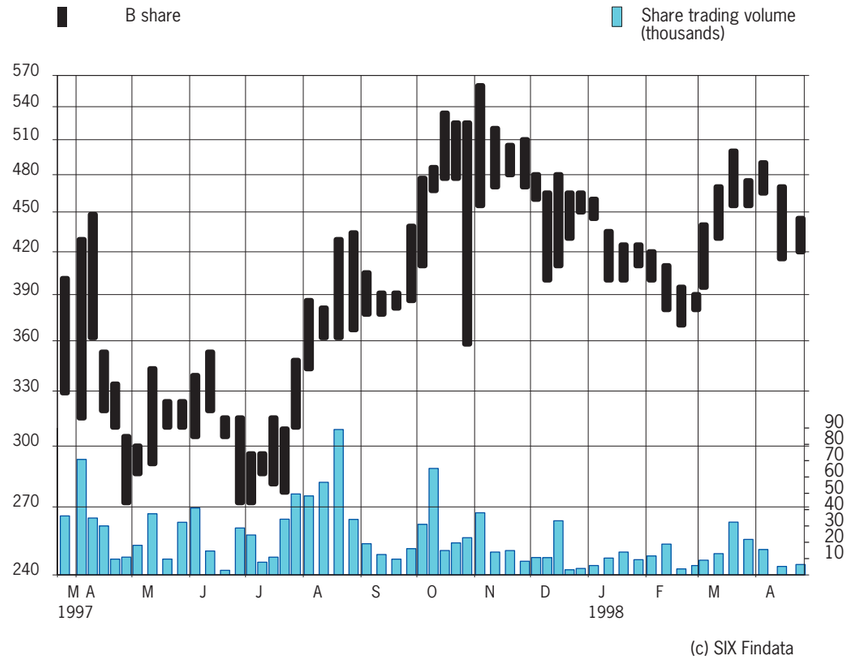
Net Insight will not pay any dividend until an accumulated positive cash flow has been generated from operations. Dividends, if any, will be distributed by VPC.

Future stock exchange listing

Net Insight shares will remain unofficially listed for the next few years. Thereafter, Net Insight plans to list the company's series B shares on a Swedish or foreign stock exchange.

Shareholders' agreement

A shareholders' agreement has been concluded between the three founders of Net Insight. The main purpose of the agreement is to clarify the rights and obligations between the founders regarding the activities of the company and to commit the founders to working loyally together in the best interests of the company. The shareholders' agreement includes, among other issues, a pre-emption clause, and the founders have committed themselves through the agreement not to conduct or in other ways promote or support any business which competes with the activities which, according to the founders, shall be conducted by Net Insight. This agreement expires no earlier than spring 2000.



(c) SIX Findata

Share price

Net Insight's series B shares have been unofficially listed since March 24, 1997, first by Servisen Fondkommission AB and subsequently Nordiska Fondkommission have listed bid and ask prices. The closing price paid on February 27, 1998, was SEK 390, which corresponds to a market capitalisation of SEK 524 million. The average daily trading volume since March 24, 1997, has been approximately 5,000 shares.

Administration report

Annual Report for the period August 9, 1996 – December 31, 1997.

Net Insight AB (publ)
Co. reg. no. 556533-4397

Important events during the financial year

- Development costs, stock issue expense and start up costs together with the creation of a strategic plan amounted to SEK –31.6 million.
- Liquidity is good and amounted to more than SEK 80 million as of December 31, 1997.
- Net Insight received SEK 35 million from a directed new share issue in early 1997 and a further SEK 72.7 million from an issue of shares based on preferential rights for Net Insight shareholders in November 1997.
- The company's activities have focused on developing a system to improve capacity and quality of data, voice and video traffic in high-capacity networks.
- The company's operations are in a start-up phase and have focused on product development during the period.
- The recruitment of key personnel during the year ensured a higher development tempo. As of December 31, 1997, the company had 29 employees.
- A preliminary design of the hardware (switch) to be used in the field test was finished at year-end.
- A statement of intent has been signed with an operator regarding systems development.
- The consulting firm Bain & Co. of San Francisco has defined target markets and market potential.

Important events in early 1998

- Beta products were tested and demonstrated for potential customers and partners in the company's laboratory in February.
- Bengt Olsson assumed duties as the company's new Managing Director on March 1.
- Lars Kahn took up duties in the beginning of 1998 in a newly established position with responsibility for the European market and for leading standardisation work.
- As of March 30, 1998, there were 36 employees, including four PH.D. candidates.
- On March 26, 1998, Net Insight concluded a contract with Vasa Läns Telefon of Finland for a test project for a city network in October 1998.
- Net Insight is currently negotiating for four more test projects in Europe and with an operator in North America with whom a statement of intent was signed on January 30, 1998.
- The company has initiated standar disation of DTM technology within the framework of the european telecommunication standards institute (ETSI).

Operations and background

Net Insight was founded in August 1996 to develop and market systems for high-capacity networks based on DTM technology. The DTM technology had been developed by the company's three founders as a research project at the Royal Institute of Technology (KTH) in Stockholm.

Net Insight started its operations in November 1996 and the company raised SEK 35 million through a directed new issue in early 1997. At present, operations are at a start-up stage. Work is in progress with the development of the company's first product, a switch which will form one of the key components in Net Insight's product series. Operations are conducted in Stockholm, and preparations have been made for the opening of a US subsidiary with an office in California.

The company's series B shares have been traded by Nordiska Fondkommission AB as market maker since March 24, 1997 (earlier by Servisen Fondkommission). As of December 31, 1997, the company had

1,140 shareholders registered at Värdepapperscentralen VPC AB (Securities Register Centre).

Personnel

Net Insight's high-tech operations require highly educated personnel. Recruitment conducted so far has resulted in the company securing key employees who taken together possess the comprehensive technical competence necessary to achieve development goals. The company's three founders have been employed by the company since the beginning of 1997. At the end of the financial period, the company had 29 employees. All key employees own shares and/or warrants (see "Financing, liquidity and results").

Patents and licensing agreements

Net Insight has at its disposal the rights to the technology that forms the basis of the company's operations. The founders, who are also the largest shareholders, have applied for four patents which are expected to be processed in the coming year. The Swedish Patent and Registration Office has notified Net Insight that the department has approved one of these patent applications. The rights according to all these patents and patent applications have been transferred to Net Insight by the founders. In addition, the company holds licenses for two patents held by Telefonaktiebolaget LM Ericsson and three patent applications held by Dynarc AB. These licensing agreements are reciprocal in so far as Net Insight in return has granted licenses to the rights the company possesses under the above-mentioned patents and patent applications and transfer agreements. The company has applied for four international patents, so-called PCT applications. In addition, the company has submitted applications for six further Swedish patents.

Technical development

Operations are focused on commercialising the results of the KTH research. Technical development is focused on those products that can first be used in marketing (test products for field tests) and subsequently in commercial operations.

The company's technical development adheres to the schedule established in summer 1997. The first generation of commercial products is expected to be completed by the end of 1998. A preliminary design of the hardware (a switch) was completed in the last quarter of 1997. A version of the switch was tested in the company's laboratory in February 1998. Net Insight's product series increases the degree of network utilisation and improves handling of information requiring high precision. It will be able to relieve and supplement IP routers mainly in high-speed network sections by utilising high capacity and built-in intelligence. Total network capacity is thereby improved substantially. The switch will enable a dynamic reallocation of bandwidth among different users based on demand.

All expenses incurred in connection with product development are written off at the time of their occurrence.

Markets and customers

Net Insight's customers will mainly consist of operators investing in high-capacity networks with a focus on Internet traffic. Net Insight's first generation of products will be used in networks handling aggregated traffic between Internet service providers and IP routers in corporate intranets (LANs). Net Insight's customers are thus network operators, mainly Internet service providers. In due course, future customers may also be suppliers of telecommunications and data communications equipment.

Increased demand in the market for Internet services with a focus on data traffic, audio and video has contributed to a considerable interest in Net Insight. The test product is expected to facilitate marketing and sales in connection with the planned product launch at the end of 1998. The conclusion of an agreement on field tests is expected sometime during the spring and early summer of 1998.
At the request of the Board of Directors, Bain & Co. of San Francisco has conducted a market survey of the company's potential target segments to provide the Board with information for decisions concerning customer and partnership strategies. At the time of writing (end of March), Net Insight is negotiating five shared test projects in Europe and two in North America. The goal is to carry out at least two test projects this year in order to establish two customer relationships by year-end.

Financing, liquidity and results

Technical development and start-up work have so far been financed with shareholders' equity.

On November 30, 1996, an Extraordinary Meeting of Shareholders decided on a further new issue of 35,000 series B shares directed at institutional and private investors. The subscription price was set at SEK 1,000 per share. The share capital was thereby increased by SEK 175,000 to SEK 280,000. The remaining SEK 34,825,000 was placed in the company's share premium reserve. The new issue had been successfully placed and has been registered with the Swedish Patent and Registration Office since February 28, 1997.

At an Extraordinary Meeting of Shareholders on March 12, 1997, a resolution was passed to transfer SEK 560,000 from the share premium reserve to the share capital partly by means of a bonus issue whereby the par value of the share was increased from SEK 5 to SEK 15; and partly by means of a split whereby the par value of a share was changed to SEK 0.75; and by issuing a promissory note in the nominal amount of SEK10,000 in combination with warrants carrying the rights to subscribe for new shares. The company thus has 60,000 warrants outstanding with a subscription period during the first six months of 2000 at a subscription price of SEK 150. The shareholders further decided that Net Insight should become a public company (publ.). The bonus issue and other matters decided by the Extraordinary Meeting of Shareholders have been registered with the Swedish Patent and Registration Office since March 19, 1997.

At an Extraordinary Meeting of Shareholders on October 17, 1997, a resolution was passed, among other things, to carry out another new preferential issue for Net Insight's shareholders in November 1997. The issue raised approximately SEK 72.7 million (before issue expenses), which will provide the company with the financial resources for completing the development and commercialisation of its first generation of products. The meeting also decided to issue another promissory note in the nominal amount of SEK 80,000 in combination with 80,000 warrants carrying the right to subscribe for new shares. The warrants have a subscription period during the first six months of 2000 at a subscription price of SEK 950. This warrant financing has not been issued yet, but the intention is to issue it during April 1998.

Net Insight has thus issued two series of warrants with a maximum dilution of 140,000 shares or 9.4 percent of the share capital.

At present, the company has no operating income. The results for the period were SEK –31.6 million. Development costs, stock issue expense and one-off start-up costs have been charged to the results. As of December 31, 1997, liquidity in the form of cash and cash equivalents amounted to SEK 80.7 million.

Investments

The company's investments during the period have mainly been related to equipment used in product development. Capitalised investments amounted to SEK 0.7 million, gross.

Proposed disposition of the company's losses

The Board of Directors and the Managing Director recommend that the year's loss of SEK 31,633,852 be treated in the following manner:

To be carried forward	-31,634
Total	-31,634

Regarding company results and accounts, see the following income and financial statements together with accompanying notes.

Income statement

Amount in SEK thousands	Notes	1996-08-09– 1997-12-31
Net sales		–
Marketing costs	1,2,5	–7,227
Administrative expenses	1,3,5	–10,034
Development expenses	1,4,5	–15,292
Operating profit/loss		**– 32,553**
Income from financial investments		
Interest income and similar items	6	92,4
Interest expenses and similar items	7	–5
Profit/loss after financial items		**–31,634**
Tax on profit/loss for the year		–
Net profit/loss for the year		**–31,634**

Balance sheet

Amount in SEK thousands	Not	97-12-31
ASSETS		
Fixed assets		
Tangible assets		
Equipment, tools, fixtures and fittings	8	536
Total fixed assets		**536**
CURRENT ASSETS		
Current receivables		
Other receivables		1,714
Prepaid expenses	9	204
Cash and bank balances		80,722
Total current assets		82,640
TOTAL ASSETS		**83,176**
EQUITY AND LIABILITIES		
Equity	10	
Restricted equity		
Share capital	11	1,008
Share premium reserve		106,978
		107,986
Non-restricted equity		
Profit/loss for the year		–31,634
		76,352
Current liabilities		
Accounts payable - trade		5,026
Other liabilities		524
Accrued expenses	12	1,274
		6,824
TOTAL EQUITY AND LIABILITIES		**83 ,176**
Pledged assets and contingent liabilities		
Pledged assets		None
Contingent liabilities		None

Cash flow statement

Amount in SEK thousands	
Current operations	
Operating profit/loss	–32,553
Depreciation	208
Interest received	924
Interest paid	–5
Cash flow from current operations before change in working capital	–31,426
Changes in working capital	
Increase in receivables	–1,918
Increase in current liabilities	6,824
Cash flow from current operations	**–26,520**
Investment activity	
Acquisition of tangible assets	–744
Cash flow from investment activity	**–744**
Financing activities	
Share issue	107,986
Cash flow from financing activities	**107,986**
Increase in liquid assets	80,722
Liquid assets at year-end	**80,722**

Notes on accounting principles and financial statements

General accounting standards
The accounting standards applied are in accordance with the Annual Accounts Act and the recommendations of the Swedish Accounting Standards Board, the Swedish Financial Accounting Standards Council and the Swedish Institute of Authorised Public Accountants.

Valuation principles, etc.
Assets, provisions and liabilities have been valued at acquisition value unless otherwise stated.

Expenses for development work
Expenses for development work are charged to income as they occur, in agreement with the recommendations of the Swedish Accounting Standards Board (BFN R1) as well as the International Accounting Standards recommendation no. 9 (IAS 9).

Receivables
Following individual valuation, receivables are entered at the amount in which they are expected to be received.

Receivables and liabilities in foreign currencies
Receivable and liabilities in foreign currencies are converted at the exchange rate at the end of the accounting year in accordance with Swedish Accounting Standards Board recommendation nr. 7.

Depreciation principles for fixed assets
Depreciations is according to schedule based on original acquisition value and expected economic life. Write-down takes place with permanent diminution of value.

The following depreciation schedule applies:

Tangible assets	
Equipment, tools, fixtures and fittings	5 years

Notes

Note 1. Employees and personnel costs

Average numner of employees		percentage men
Sweden	15	95 %

The number of employees has steadily increased during the period under review, reaching 29 at year-end.

Wages, other compensation and social costs

	Wages and compensations	Social costs
Board of Directors and former Managing Director	1,329	419
(of which pension costs)	169	(–)
Other employees	3,879	1,223
(of which pension costs)	303	(–)
Total	**5,208**	**1,642**
(of which pension costs)	472	(–)

Executive officer terms and compensation
Janez Skubic's employment as Managing Director terminated at the end of January 1998. Compensation was paid at termination in the form of six month's wages and a severance payment totalling SEK 860,000, not including social costs.

Bengt Olsson assumed duties as Managing Director on March 1, 1998. Bengt Olsson has been guaranteed an employment term of 15 months, of which the last six months are conditional in the event of new employment. The company's pension commitment to Bengt Olsson is the ITP plan plus two basic amounts per year.

Lars Gauffin, a board member as well as one of the founders, has received SEK 572,000 in wages from the company. Ulf Lindgren and Lage Jonason, both members of the board, have received compensation from Net Insight for consultant services according to agreements with their own companies. Ulf Lindgren has received SEK 900,000, and Lage Jonason has received SEK 800,000, or a total of SEK 1.7 million for the period up to February 1997. This compensation is part of the accounted costs for the stock issue decided November 30, 1996 (see note 3). Ulf Lindgren has subsequently received SEK 1.239 million through his own company for agreed consultancy services. The board member fee has not been paid.

Note 2. Marketing costs.

Marketing costs include an item for the Bain study totalling SEK 4.213 million.

Note 3. Administrative expenses

Administration expenses include stock issue expenses and start-up costs totalling SEK 8.616 million.

Note 4. Development expenses

Development expense consist primarily of costs for product development, computer purchases, patent applications, licenses and wage costs for personnel in development work.

Note 5. Depreciation of tangible assets

Equipment, tools, fixtures and fittings	208
	208

Depreciation allocated to unctions

Marketing costs	21
Administrative expenses	21
Development expenses	166
	208

Note 6. Interest income and similar items

Interest income	924

Note 7. Interest expense and similar items

Interest expense	–5

Note 8. Equipment, tools, fixtures and fittings

Accumulated acquisition value	
At the beginning of the year	–
New acquisitions	744
	744
Accumulated scheduled depreciation at beginning of the year	–
The year's depreciation according to schedule for replacement value	–208
	–208
	–
Scheduled residual value at year-end	**536**

Note 9. Prepaid expenses

Contains the following larger items:

Rent for first quarter 1998	111
Other items	93
Total	**204**

Note 10. Equity

	Share capital	Share premium reserve	Net profit/ loss
Profit/loss for the year			
At the beginning of the year	-	-	-
Company formation	100	-	-
New issue (961107)	5	-	-
New issue (961130)	175	34,825	-
Bonus issue	560	–560	-
New issue (971017)	168	72,569	-
Warrant premiums (employees)	-	144	-
Profit/loss for the year	-	-	–31,634
At year-end	**1,008**	**106,978**	**–31,634**

Note 11. Share capital

The share capital is distributed among 1,343,806 shares with a par value of SEK 0.75 per share. Each series A share carries 10 votes and each series B share carries one vote.

	Number of shares	Warrants
Non-restricted series A shares	180,000	–
Non-restricted series B shares	1,163,806	–
Warrants I (970317)		60,000
Warrants II(971017)	80,000	
Total	**1,343,806**	**140,000**

Note 12. Accrued expenses

Contains the following larger items:	
Holiday pay liability	275
Social security expenses	409
Other items	590
Total	**1,274**

Stockholm, April 16, 1998

Ulf Lindgren
Chairman of the board

Lars Gauffin

Bernt Magnusson

Lage Jonason

Johan Hernmarck

Bengt Olsson
Managing Director

Auditor's Report

To the General Meeting of Shareholders of Net Insight
Organisation No. 556533-4397

I have audited the annual report, the accounts and the administration by the Board of Directors and the President of Net Insight AB for the fiscal year August 9, 1996 to December 31, 1997. The Board of Directors and the President are responsible for the accounting records and the administration. It is my responsibility to express an opinion, based on my audit, on the annual report and the administration.

The audit has been conducted in accordance with generally accepted auditing standards. This means that I have planned and performed the audit in order to give reasonable assurance that the annual report is free from material misstatement. An audit includes examination, on a test basis, of evidence of amounts and other information in the accounting records. An audit also includes an assessment of the appropriateness of the accounting principles and the application of these by the Board of Directors and the President as well as an assessment of the disclosure of information in the annual report. I have examined material decisions, activities and relationships within the company in order to evaluate whether any of the Board members or the President are liable to pay damages to the company, or if they have in any other way acted against the Swedish Companies Act, the Annual Accounts Act or the Articles of Association. I consider that my audit provides reasonable grounds for the following opinion.

The annual report has been prepared in accordance with the Annual Accounts Act. I recommend:

- that the Income Statement and the Balance Sheet be adopted; and
- that the loss be treated in accordance with the proposal in the Adminis tration Report.
- The Board of Directors and the President have not taken any decisions or neglected any duties that in my opinion could result in liability for damages. I recommend:
- that the members of the Board and the President be discharged from liability for the fiscal year.

Stockholm, April 20, 1998

Hans Lindén
Authorised Public Accountant

The board of directors

Ulf Lindgren

Lage Jonason

Johan Hernmarck

Bernt Magnusson

Lars Gauffin

Ulf Lindgren
Born 1954.
Chairman of the Board

Ph.D. in Business Administration, Stockholm School of Economics, 1982. Private investor, invests mainly in small, high-tech companies. Formerly director of Bain & Co., Inc.

Shareholding in Net Insight: 26,780 B shares; 12,000 call options issued by founders.

Lage Jonason
Born 1951.
Board member.

Managing Director, Nordiska Holding AB. Member of the boards of City Mail Sweden AB and Stock Rock AB.

Shareholding in Net Insight: 24,500 B shares; 8,000 call options issued by founders.

Bernt Magnusson
Born 1941.
Vice Chairman.

Chairman of the Board of NCC AB, Swedish Match AB. Vice Chairman of the Board of Avesta Sheffield AB. Member of the boards of Nordbanken AB, Burmah Castrol plc, Silja Oy Ab, Höganäs AB, ICB Shipping AB, Nordstjernan AB, Industriförbundet and the Stockholm Chamber of Commerce. Adviser to the European Bank for Reconstruction and Development.

Shareholding in Net Insight: 8,160 B shares; 10,000 call options issued by founders.

Johan Hernmarck
Born 1956.
Board member.

Managing Director, Provider AB. Chairman of the Board of Comenius AB. Member of the boards of Provider AB, Entra Data AB, Lap Power Holding AB, Information Highway Center AB, Auktion On-Line, Spider ICD AB, MultiQ International AB and Service Simulator A.S.

Shareholding in Net Insight: –

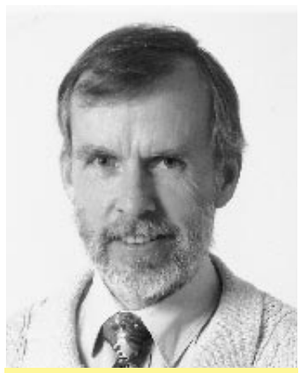
Lars Gauffin
Born 1941.
Board member.

Head of Technical Development, Net Insight.

Shareholding in Net Insight: 60,000 A shares, 75,780 B shares.

Bengt Olsson

Lars Kahn



Seved Torstendahl

Per Lindgren

Christer Bohm

Bengt Olsson
Born 1943.
Managing Director.

Bengt has previously held management positions in IBM, Gadelius, Kebo, Digital and Dow Jones.

Shareholding in Net Insight: 5,000 B shares; 17,500 warrants.

Christer Bohm
Born 1966.
Ph.D. in Teleinformatics (KTH).
Head of Systems Development.

Christer was previously Assistant Professor at KTH, where he was involved in the DTM project, among other things. He has also been involved in the Merci and Stockholm Gigabit Network projects.

Shareholding in Net Insight: 60,000 A shares; 72,265 B shares.

Seved Torstendahl
Born1944.
M.Sc. in Computer Science (KTH 1971). Head of Software Development.

Shareholding in Net Insight: 50 B shares and 3 000 warrants .

Lars Gauffin
Born 1943.
M.Sc. in Computer Science (KTH 1971). Head of Software Development.

Lars Gauffin has experience from Ericsson, Telia and KTH, where he worked with telecommunications, data communications and distributed systems. At KTH, he was involved in the DTM project.

Shareholding in Net Insight: 60,000 A shares; 75,780 B shares.

Per Lindgren
Born 1967.
Ph.D. in Teleinformatics (KTH 1996).
Head of Product Development.

Per was previously Assistant Professor at KTH, where he was involved in the DTM project, among other things. He has also been involved in the DIM project.

Shareholding in Net Insight: 60,000 A shares; 72,743 B shares.

Lars Kahn
Born 1941.
Ph.D. in Information Processing (1978). Responsible for standardisation work and the European market.

Lars Kahn has worked in Telia's corporate planning team with international strategy issues, including standardisation.

Shareholding in Net Insight: 224 B shares; 5,000 warrants.

Trends in the network industry

Over the last 3-4 years, the number of Internet users has doubled approximately every six months. This fact together with the introduction of new Internet services has increased the requirements on the networks that handle Internet traffic. In addition to requirements for higher capacity, there will be higher requirements on networks for real-time support and multicast.

The number of services containing video has also increased. This will, in turn, significantly increase the need for capacity in existing networks and further increase the requirements for cost efficient networking solutions with support for real-time traffic.

Today the following trends can be seen on the application side:

- Increased utilisation. The average utilisation of networking capacity per person is increasing, as more and more individuals and companies gain access to computers, the Internet and company-specific networks called intranets.
- *Globalisation of traffic*. Before the IT-revolution, local traffic, such as local telephone calls, accounted for by far the greatest proportion of traffic in public networks. Increasing use of the Internet, however, has led to a shift from local to long distance traffic.
- *Shift towards multimedia*. Previously, information transferred via so-called information networks consisted largely of audio or video. The entertainment and media industries have been driving factors in the development towards multimedia, as a mix of data, audio, and video is crucial in order to produce attractive information services, informative entertainment, and interesting games.
- Increased integration of separate networks. Along with the spread of the Internet and of intranets within companies, more and more individual computers and smaller networks are being connected to each other to form even larger networks, which increases the volume of traffic.

The network operator's situation

The transmission capacity of optical fibres is currently increasing significantly faster than the computing capacity of computers. As the use of optical fibres in networks has increased, the network nodes have increasingly come to be the limiting factor since the practically possible transmission capacity increases faster than the nodes' ability to, with today's technology, process the information. Today's communication solutions will probably neither be functional nor cost efficient in the future when companies want to offer services with real-time support, such as music or video, in combination with Internet services.

All in all, this presents the network operators with a number of challenges:

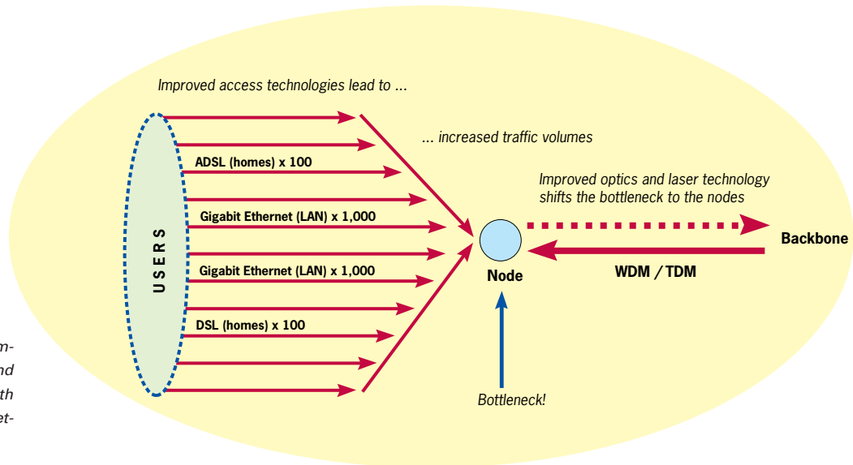
- *High investment costs*. The cost of investing in infrastructure, such as optical fibre, is high. At the same time there are large quantities of existing fibres, whose theoretical transmission capacity cannot be fully utilised with today's technology. In order to be able to increase traffic volume, new parallel fibres will have to be laid. If the operators could make better use of the existing fibres instead, such investment would not be necessary.
- *Unsatisfactory resource matching*. If it were possible to allocate and distribute capacity to match customer needs, the operator would be able to differentiate billing for different services on economic grounds, and offer different kinds of services to suit the needs of different users. Today, an operator needs large amounts of surplus capacity to be able to handle traffic peaks, resulting in on average low capacity utilisation.
- *Difficulties in offering differentiated pricing*. As the range of offered products increases and the mix of information becomes more varied, it becomes both more difficult and more important to offer a differentiated billing system. The billing systems currently available to network operators are both unreliable and complex, which leads to difficulties in measuring and influencing profitability. As regards Internet traffic, it is at present impossible to measure every individual's utilisation of resources.
- *The capacity of today's network structures is relatively difficult to increase*. A new technology allowing more flexible expansion would make it easier to increase capacity.
- *Inadequate support for the transmission of a mix of data, audio and video*. The majority of today's traffic consists of ordinary text data and speech. The situation is worsened by applications containing a mix of data, audio, and video, demanding significantly higher quality and precision, i.e. demand for real-time support. In addition, it leads to bottlenecks in the networks.

Meeting these challenges calls for continued upgrading of existing networks and networking equipment and for the development of new technological solutions. A change from application networks to information networks would bring major cost benefits for an operator since all traffic can be gathered in one network. However, being able to integrate everything in one network calls for dynamic resource allocation over the entire network.

Need for new solutions

Thus, as described above, there is a need for a protocol that is not based on computing and storage capacity at the nodes but which instead limits complex operations to minimise the load on the nodes and to maximise the transmission capacity. Even if computer capacity were to double every year or every other year, as has been the case in recent years, demands for very high transmission capacity, for real-time video for example, would require significantly greater capacity at the nodes than computers, with today's protocols, are expected to be able to handle, now or in the future. At higher bandwidths, the properties of today's systems are such that a doubling of the bandwidth means more than a doubling of the computing capacity. A consequence of this is limited scalability i.e. possible expansion of the capacity.

Against this background, the Dynamic synchronous Transfer Mode (DTM) protocol was developed first at Ellemtel and later in a research project at KTH in Stockholm. DTM is designed to increase the utilisation of the theoretical transmission capacity of fibres. The protocol was designed so that the switches perform minimal processing of the information, thus reducing the network operating costs, and ensuring the quality of service and high capacity.



Improved user technologies, improved fibre optics solutions and increased demands for bandwidth shift the bottlenecks in the networks to the nodes.

Technical overview

The following section is an in-depth description of the technical terms that can be found previously in the text.

CAPACITY

The space needed to store information is digitally stated in the unit bytes.
The transmission capacity of networks is measured in bits per second (bps), where one byte is made up of multiples of 8 bits, i.e. 8, 16, 32 or 64, depending on the technology used. One bit is the smallest amount of information that can be transmitted; its value can be either 0 or 1. A telephone conversation corresponds to approximately 64,000 bps, CD sound approximately 1.4 Mbps and video approximately 1.5-8.0 Mbps.

TRANSMISSION MEDIUM

The transmission medium in today's networks is mainly fibre optics or copper wire, but coaxial cable and radio links are also used.

Copper Wire

Copper wire is used to carry analogue signals, mainly in older networks, such as the final section of the telephone line to almost every home. The greatest drawback of copper wire is that the capacity is limited. Communication over copper wire with digital equipment such as computers requires devices to convert analogue signals to digital signals and vice versa, so-called modems. In recent years, telecommunications operators have invested heavily in replacing copper wire with fibre-optics, mainly in backbones.

Fibre Optics

Fibre-optic networks are based on sending pulsed light waves through a cable of glass. Research in the field of Fibre-optics has been successful and transmission capacities in fibre-optic cables of up to approximately 10,000 Gbps are possible today.

To be able to offer customers access to high capacity, optical fibre is required all the way. However, it will take time for telecommunications operators to provide optical fibre right up to the end-user, so-called "fibre-to-the-home". This development has progressed furthest in North America, Scandinavia, the UK and the former East Germany, Else-where in the world however, development is slower. Instead, suppliers of network equipment have developed after solutions such as ISDN and ADSL to increase the capacity of existing copper wires in order to achieve sufficient quality of video services, which require transmission capacities of slightly more than 2 Mbps. ADSL increases capacity by a factor of at least 40. However, for ADSL to achieve a breakthrough, operators have to invest heavily in transport and aggregating equipment to be able to handle the significantly increased traffic.

NETWORK TECHNOLOGIES

Fundamental to the construction of a network is the way data is broken down into smaller parts and the way connections between nodes are established.

Circuit Switching and Packet Switching

In principle, two basic technologies are used for building high-capacity networks:
- circuit switching
- packet switching

Circuit Switching

Where circuit switching is used, data is not stored in the networks; instead, capacity is reserved all the way before data is transferred. This allows large amounts of data to be transferred with guaranteed transmission capacity and support for real-time traffic. The disadvantage of circuit switching is that the degree of utilisation of the network is low when transferring short, messages since it takes a long time to establish a circuit in traditional circuit-switched networks. The traditional voice telephone service is an example of circuit switching.

Packet Switching

Packet switching was developed to cope better with the data transmission limitations of the networks during bursts of random traffic. A data stream is broken down into standardised packets, each of which contains address, size, sequence and error checking information in addition to the data it contains. The packets are sent independently of each other through the network where specific packet switches sort and direct each single packet.

Packet-switched networks are based either on connectionless or connection-oriented technology. In connectionless technology such as the Internet Protocol (IP), packets can be processed independently of each other inside the nodes since complete information concerning direction of choice is contained in each packet. There is therefore no need to set up a specific channel before data can be transferred. With connection-oriented technology, such as ATM, a logical channel is established before data transfer begins. Instead, each packet contains a channel identifier.

In packet-switched networks, delays can occur between packets because there is buffering of data in the network. Buffers are located at the switches, so that the load on the switches varies with the traffic situation. Queues arise if packets from multiple senders enter the switch at the same time and shall leave at the same time. This can lead to delays and packet losses. The ability to support real-time traffic in packet-switched networks calls for advanced control mechanisms for buffer handling and direction; the result of which is that the complexity and the need to be able to process information, and therefore the need for computer power, increases sharply at high transmission capacity.

Distribution of Bit Streams

There are two technologies for physical distribution of bit streams in networks and for simultaneous handling of several channels:
- Time Division Multiplexing (TDM)
- Wave Division Multiplexing (WDM)

With TDM, a bit stream is divided into time units so that more channels per bit stream can be obtained.

With WDM, which is a more recent technology, several lasers operating at different frequencies are used to send multiple signals simultaneously over a fibre, i.e. several parallel bit streams at different wavelengths. Today's WDM products use up to 40 channels simultaneously, thus increasing the capacity of fibre by a factor of approximately 40. WDM with 40 channels is commonly called 40-colour WDM, since different light frequencies represent different colours.

WDM is an efficient way of transmitting large amounts of data over a single fibre. Capacity can thereby be increased by sending several parallel bit streams without having to develop laser tehnology further towards higher bit rates. Every WDM channel can in turn be TDM-based. TDM and WDM should therefore be seen as complementary rather than competing technologies.
At present, WDM is experiencing rapid market development, but increased use of WDM means that today's network nodes, i.e. switches and routers, will be overloaded, since the information transfer capacity is increasing dramatically.

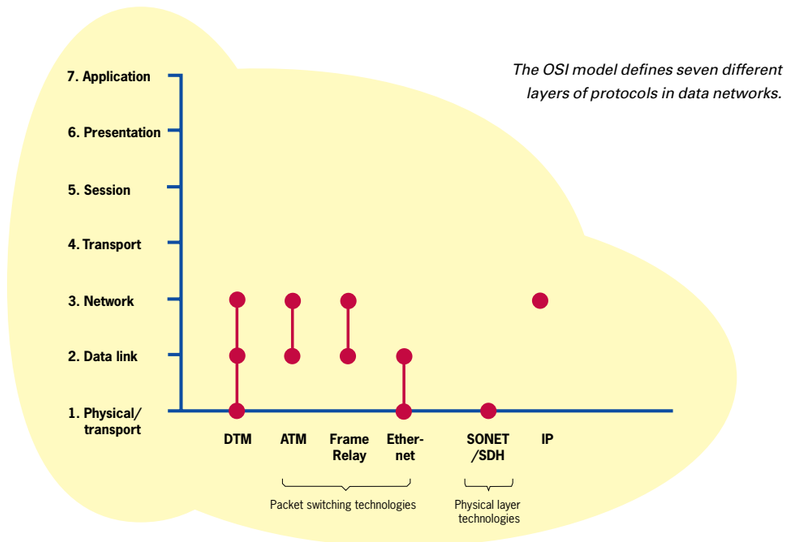
COMMUNICATION PROTOCOLS AND NETWORKING EQUIPMENT

Communication Protocols

The OSI Model

The OSI model (open systems interconnection) defines seven different layers of protocols in data networks. The OSI model was developed in the 1970s by the International Standardisation Organisation (ISO) and defines protocol functions on seven layers. The fundamental layers are the transport, link and network layers.

For two pieces of equipment to be able to communicate with each other, they must be compatible on the layers for which the equipment is intended. For example, a layer 1 SONET/SDH terminal can only communicate with another SONET/SDH terminal, but not with Ethernet equipment. Similarly, an IP router can communicate with another piece of IP equipment regardless of the underlying protocols, which may ATM or Frame Relay, for example.



The OSI model defines seven different layers of protocols in data networks.

SONET/SDH

Synchronous Optical Network (SONET) and Synchronous Digital Hierarchy (SDH) are pure transport technologies (OSI layer 1). SONET/SDH is used for long-distance telephony and data transport, and has experienced a strong market development mainly because it is an established and standardised technology. Using SONET/SDH in a network requires protocols of a higher OSI layer such as ATM on layer 2 and ATM or IP on layer 3.

Once of the drawbacks is that SONET/SDH in combination with IP only works in permanently wired "point-to-point" connections and does not support switching. In addition, all information must be processed in the router, and the connection is also always static with low flexibility, which means that the capacity cannot be adapted to suit requirements. To be able to gain switching possibility, SONET/SDH is normally combined with ATM or, alternatively, all IP packets must be processed in the router, which, however, can lead to bottlenecks.

ATM

Asynchronous Transfer Mode (ATM) is a further development of the packet-switched technology. In an ATM network, data is divided into small packets of equal size or fixed cells, as opposed to larger packets of variable size, which is the case in traditional packet-switched networks. The packets are transported in the network and joined together on arrival, after having been sorted into the correct order. The technology allows more than one user to send or receive data at the same time.

Many players see ATM as the technology of the future, and very large investments have been made in producing commercial products. Similar to other packet-switched technologies, problems arise with ATM when the speed of the processors increases.

ATM also requires an underlying transport protocol, which usually takes the form of SONET/SDH. However, ATM and SONET/SDH are designed according to different principles, with SDH as a fixed resource and ATM as a resource optimising technology, which has led to certain problems. At the Supercom98 trade fair in New Orleans in the United States in June 1997, a new technical solution was presented, making use of the functionality of ATM without the rigidity of SONET/SDH, a so-called ATM/SONET/SDH solution.

Frame Relay

Frame Relay is a technology mainly used for up-linking and down-linking to the transport parts of the networks. However, the technology has its limitations at higher capacities, since it requires large amounts of computer capacity at the nodes. In larger networks, for example WANs, and in pure transport networks, the high capacity demands have led to operators increasingly choosing other solutions than Frame Relay, for example switched ATM solutions.

Ethernet and Fast Ethernet

Ethernet and its successor Fast Ethernet are mainly used in smaller local networks to link together a lower number of personal computers and printers. Ethernet and Fast Ethernet are primarily used as access technologies, since they are intended for distances of less than 500 metres between nodes.

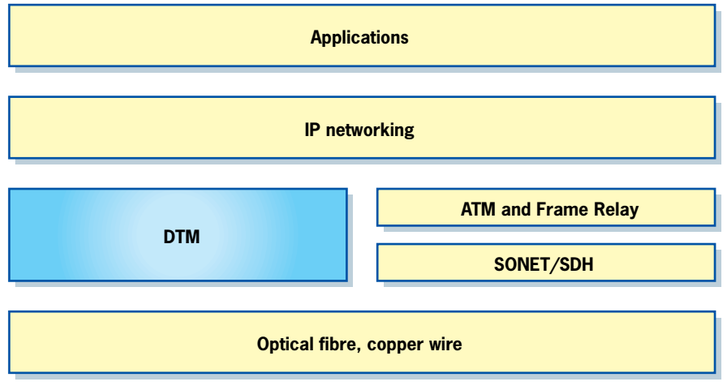
Gigabit Ethernet

Gigabit Ethernet is being launched as both a shared and a switched solution. It operates at a maximum speed of about 1 Gbps (1.000.000.000 bps). Gigabit Ethernet requires fibre-based networks. The technology will probably be used in the end-user and access parts of the network, since it is designed for short distances.

DTM

DTM can be used for direct communication between different applications or as a carrier for other protocols. One of the advantages of DTM is that it reduces the number of protocols needed and thereby networking equipment and network management are simplified.

DTM has been designed to support bandwidth-demanding real-time multimedia applications, computer communication and traditional telephony. DTM is more of a circuit-switched than packet-switched (fast circuit switched/multi-rate) technology, which gives good real-time characteristics required to guarantee that



One of the advantages of DTM is that it reduces the number of protocols needed

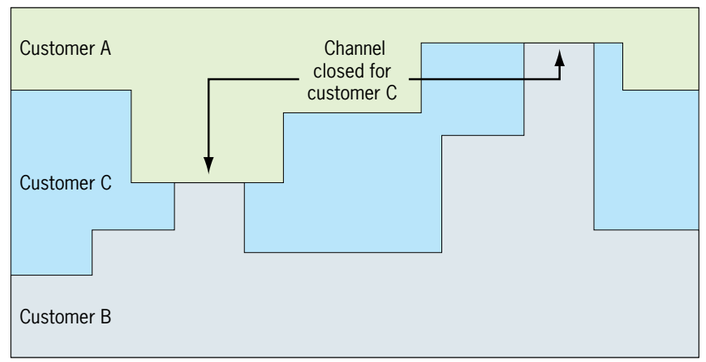
the data sent arrives in the correct order and that no data is lost.

DTM works excellently together with WDM. DTM treats the parallel wavelengths as parallel fibres, where the nodes only see bit streams passing by. This makes it possible to process only the information that is to be processed in the node, whilst the rest of the information can pass by.

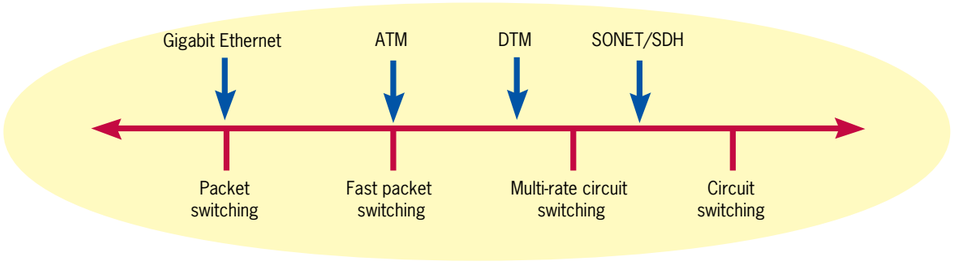
When necessary, DTM can dynamically reallocate transmission capacity between different users, so-called "bandwidth-on-demand". This means that the prerequisites for network operators to offer differentiated pricing are considerably improved.

The following is an example of this:

- Client A pays for Class 1 service: A is guaranteed a certain minimum capacity, and can obtain extra bandwidth as needed as long as there is extra bandwidth available.
- Client B pays for Class 2 service: B is not guaranteed a certain minimum capacity, but can obtain the amount of bandwidth required, as long as there is extra bandwidth available.
- Client C pays for Class 2 service: C obtains all the bandwidth that is required, but demand on bandwidth from clients in higher service classes may result in C's channel being closed off. Class 3 would be suitable for the transmission of large quantities of data with no strict time limits.



DMT enables the dynamic allocation of transfer capacity in combination with differented pricing.



DTM is more of a circuit-switching technology then a packet switching technology, which gives good characteristics for real-time applications.

Network Equipment

Different kinds of equipment are needed to transport and administrate data in a network.

SONET/SDH equipment

SONET/SDH terminals handle the transport functionality, i.e. the physical channels, in capacity-demanding parts of the network such as backbones and WANs. Higher protocols such as ATM or IP are required to supplement SONET/SDH to be able to switch traffic to end-users.

Hub

Nowadays hubs are found mainly in smaller LANs. They operate according to the shared media principle. In conventional shared medium networks, a message intended for one person is sent to every user connected to the network, even though only one user ultimately reads the message.

Switch

A switch handles logical channels above physical channels. The purpose of the switch is to direct the information in the network. Switches work mainly on OSI layer 2, but some switches are capable of operating on OSI layer 3. The IP switch is an intelligent switch operating on OSI layer 3 with the capacity to relieve the router at high traffic volumes and high speeds, mainly in backbones and WANs.

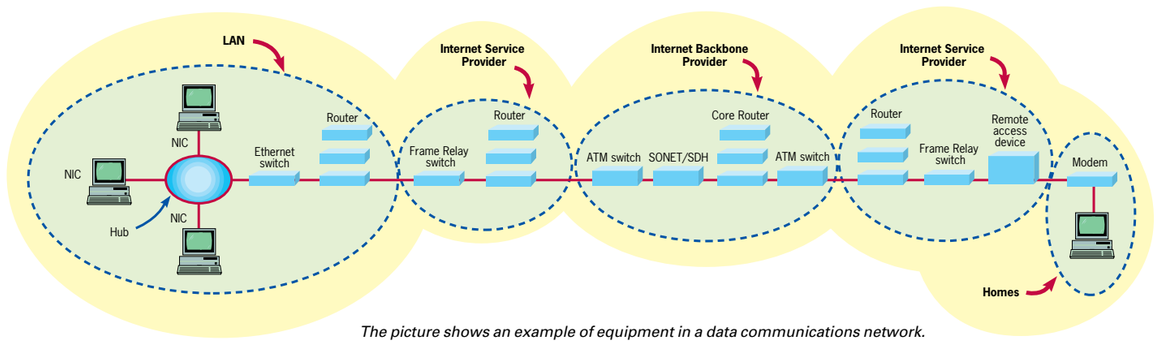
Different kinds of switches are used in different parts of the network since they have to satisfy different demands, depending on whether the switch is in a LAN or in the backbone.

Router

A router aggregates and directs traffic within and between different networks. The router works on OSI layer 3 (IP). The router maintains a map of the network and directs data packets to the intended recipients according to this map. However, the router demands relatively complex information processing, which can lead to bottlenecks in the networks when capacity increases, since the router does not have time to process the information.

Remote Access

Remote Access equipment includes modems and "set-top boxes", which translate digital signals into analogue signals or light for transport in networks. Modems are mostly used to connect a home computer to a conventional analogue copper wire telephone line.



The picture shows an example of equipment in a data communications network.

THE PATENT PROCESS

The total processing time for a patent application, from the original Swedish application to the final approval/rejection in other interesting countries, is often in the region of 4 to 7 years, which means that the total cost does not arise as a single sum, but is distributed over a longer period. The total cost of an approved patent right is often of in the order of SEK 50,000 per country.

In Sweden, an application for a patent is filed with PRV, where it is examined both formally and technically. The purpose of the technical examination is to determine whether the invention is novel and patentable. Usually, one or more submissions are made with different comments against the application before a patent can be approved. In Sweden, patents remain in force for 20 years from the day when the application was filed with PRV. The gaining of sole rights to an invention means that no-one may, without consent, commercially make use of the invention by, for example, manufacturing, selling, importing or using the patented product or a product manufactured by a patented process.

The need for the protection and support of intellectual property rights is growing in line with the internationalisation of business. Not only in order to create better conditions for innovative ideas and products on the chosen markets, but also to deal more effectively with infringement of the sole rights acquired abroad. However, a Swedish patent only offers protection in Sweden.

An application for a patent abroad must be filed within 12 months of the filing of the application in Sweden. This is so that the applicant company can request priority, i.e. so that the company can quote the Swedish filing date in the foreign application. Novel material published during the priority year then does not constitute an obstacle to obtaining a patent. Often an applicant will file a national patent application in the home country. After this, national applications can be filed in each of the countries where the applicant wishes to patent his/her invention. There are also international systems to facilitate the work of filing patent applications in several countries. The PCT convention regulates co-operation between over 80 countries in order to simplify the examination of the novelty of inventions and of their patentability on an international basis.

The novelty of an international applications examined by a small number of patent offices, one of which is Sweden's PRV.

The quality of the invention, i.e. whether the invention is sufficiently unique in relation to previously known solutions, can be assessed either through an international preliminary patentability examination, or by examination in the national patent offices of the countries where the applicant wishes to obtain a patent.

To obtain protection in the desired countries, the applicant must follow up the international application in a national phase for each country.

An international patent application can be used to postpone investments in patents if more than 12 months are needed to asses the technology and the market. According to the European Patent Convention (EPC), an application can also be submitted to the European Patent Office in Munich. After Successful examination, patents are issued for all countries listed in the application. However, to have legal force, a translation of the issued patent must be filed in the countries where the applicant wants the European patent to apply.

The aim of the EPC system is to make the process simpler and cheaper for applicants who want patent protection in several European countries. The system also makes it possible to postpone much of the patent costs until the applicant knows whether or not the patent will be approved and until more knowledge is obtained about the accessibility of the market and the technology.

Network Analogies

The following analogies, comparing electronic networks to the road network, may make it easier to understand Net Insight's business activities and the contents of this Annual report.

Term	Analogy
Transport network protocol	Roads form the basis of a society's infrastructure. There are different kinds of roads, for example gravel tracks, country roads and motorways. Similarly, transport network protocols (OSI layer 1-2) form the basis of a network.
Higher-layer protocols	Cars and lorries travel on the roads and carry loads. Similarly, higher-layer protocols (OSI layer 3 to OSI layer 7) use transport network protocols to send data between two points.
Relationship between transport protocols and higher-layer protocols	Different kinds of vehicles can travel on the same road. Similarly, different higher-layer network protocols can use the same transport network protocol.
Bandwidth	Different roads have different speed limits. Similarly, networks with different bandwidths have different transmission capacities.
Broadband technology	If you want to make a long journey it is often fastest to use the motorway. Similarly, the use of broadband technology increases the capacity of a network.
Frame relay	Cars and lorries use access roads to enter and leave a motorway. Similarly, frame relay is mainly a technology for entering and leaving the transport part of the network.
How routers work	Suppose that there are no road maps for cars and lorries. Instead they travel to the next crossing where they have to ask a traffic policeman how to get to the next crossing. At that crossing they have to ask another traffic policeman how to get to the next crossing. In routed networks, the traffic police are represented by tables.
Shared networks	Some courier cars have no road map and do not dare to stop and ask the way. Instead, the sender of a letter must hire a large number of couriers and give each one a copy of the letter. To be certain that the intended recipient gets the letter, the sender sends the courier cars in every possible direction, so that every resident in the town gets a copy of the letter. In shared networks, the network is designed so that all information is available to all user stations connected to the network.
Circuit-switched	Some vehicles are privileged enough to have a lane reserved during networks the time period the vehicle is out on the road. The lane is reserved from "door-to-door". There is no need for these vehicles to slow down and ask the way at crossings. In circuit-switched networks, private circuits are established before data can be transferred.
Voice traffic	Processions of elderly cars are travelling slowly together in the right lane. They travel in single file and are always afraid that a big lorry is going to break up their formation and delay some the cars' arrival, which might annoy the person they are going to visit. Similarly, the quality of voice traffic depends on whether the packets arrive in the right order and at the right time.

Glossary

Explanations of some of the abbreviations and expressions in this Annual Report are given below, See also "Technical Overview".

ATM	Asynchronous Transfer Mode. Communication standard defined in 1988 for high-speed communication in WANs. In 1991, the ATM Forum was formed to standardise the technology and promote the development of compatible products.
Backbone	Backbones interconnect a number of geographically distant areas or a number of smaller networks within an area. Backbones must have high capacity since they handle aggregated traffic.
Bandwidth	Popular expression for transmission capacity in a network measured in bits per second (bps).
Broadband network	Network with very high bandwidth. (Minimum 2 Mbps).
CAP	Competitive Access Provider
Channel	A path for transferring information between two points in a network.
Circuit switching technology	Communication technology in which capacity is reserved all the way before data transmission takes place.
DTM	Dynamic Synchronous Transfer Mode. Protocol for high-speed communication, developed at the Royal Institute of Technology, KTH, in Stockholm. Particularly well suited for a combination of sound and images.
Ethernet	Network architecture developed by Xerox Corporation ("Xerox"), in which all computers monitor the network for messages.
Fibre optics	Technology which uses pulsed light to send digital information.
Frame relay	A packet-switched technology which, among other things, is used for up-linking and down-linking to the transport part of the network.
G	Giga – 1,000,000,000. Used as a prefix, for example in Gbps.
Gigabit Ethernet	A technology developed from Ethernet, with the capacity to transmit data at speeds of up to 1,000 Mbps. Used mainly in large LAN backbone networks.
Hub	Connection box for cables in a network.
Internet	A global virtual network consisting of many small physical networks.
Intranet	An internal company network which operates like a miniature Internet.
IP	Internet protocol. The protocol used on the Internet for data distribution.
ISP	Internet Service Provider.
k	Kilo – 1 000. Used as a prefix, for example in kbps.
LAN	Local Area Network. Smaller network of interconnected computer equipment such as PCs, printers and servers, which work and communication together within a department, a building or an entire area.
M	Mega – 1,000,000. Used as a prefix, for example in Mbps.
Modem	Modulator-demodulator. A device which converts analogue signals into digital signals and vice versa.
Multicast	Communication one-to-many.
NIC	Network Interface Card. Hardware product used to physically connect a device such as a user station or a printer to a network.

Node	Physical unit that is connected to a network, either as a sender/receiver or to interconnect different networks at network junctions.
OSI reference model	Model which defines seven different layers of protocols in data networks.
Packet switching technology	Technology by which a bit stream is broken down into standardised packets, each of which contains address, sequence, size and error checking information in addition to the data it contains. Switches then sort the packets into the correct order.
POTS	Plain Old Telephone Service.
Protocol	An agreed set of rules for how different types of networking equipment shall communicate with each other.
Real-time	Real-time means that the time properties of individual traffic streams, and between different traffic streams, are preserved.
Remote access	A connection between a user station and a network established, for example, with the aid of a modem and a telephone line, which enables data to be transferred over a distance which would not have been possible by means of the conventional network.
Remote access	Physical unit with the ability to receive multiple connections
Concentrator	Through, for example, the telephone system, and provide those with access to a network.
Router	A node which is a combination of hardware and software and which interconnects and controls the flow of information between different kinds of networks. Routers connect protocols of different layers and interpret between them. Routers work on OSI layer 3.
Scalability	Scope of expansion of capacity.
Switch	A node which is used to set up channels to send information between two or more users in a network. Switches operate mainly on OSI layer 2, but there are, however, switches capable of operating on OSI layer 3 (layer 3 functionality).
TDM	Time Division Multiplexing. Technology in which a bit stream is divided up into time units in order to obtain more channels per bit stream.
WAN	Wide Area Network. Public networks which extend over very wide areas, such as a city, a country or globally, often with different kinds of networks interconnected.
WDM	Wave Division Multiplexing. Technology in which several lasers with different frequencies are used to send multiple signals simultaneously over a fibre, resulting in several parallel bit streams of different wavelengths.