

# CONTACT

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## Best at long distance

Alberto de Castro opted to move his family to Örebro so that his wife could pursue her career. Nevertheless, he was able to keep his job at Ericsson Telecom in Stockholm, by working three days at home and two days in Stockholm.

6

## Putting it all in system

Jorma Mobrin is now responsible for Ericsson's systems management. He and his colleagues are the spiders in the new networks being developed to link Ericsson's systems development.

8

## Patent game for billions

There is a game under way among the patent departments of the telecom companies. No one can afford to lose the opportunity to earn money on ideas. Ericsson is strengthening its patent activities.

10

## Blown out the other end

The network construction engineers at Ericsson Business Networks placed a new method for cable laying into operation. They laid a cable for data traffic from Ericsson Data in Älvsjö to Ericsson Telecom's Tellus plant by blowing the cable into the pipe.

16

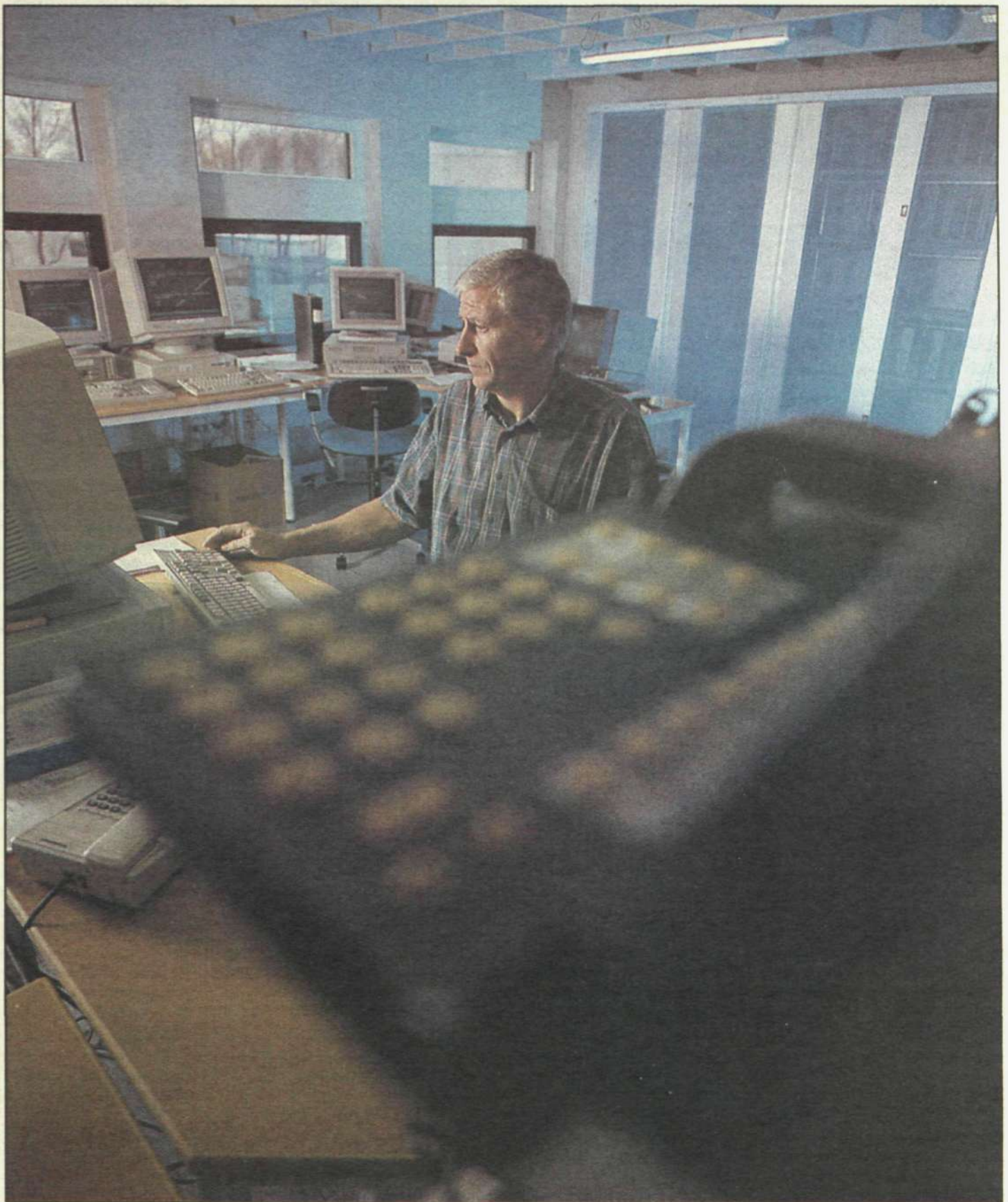


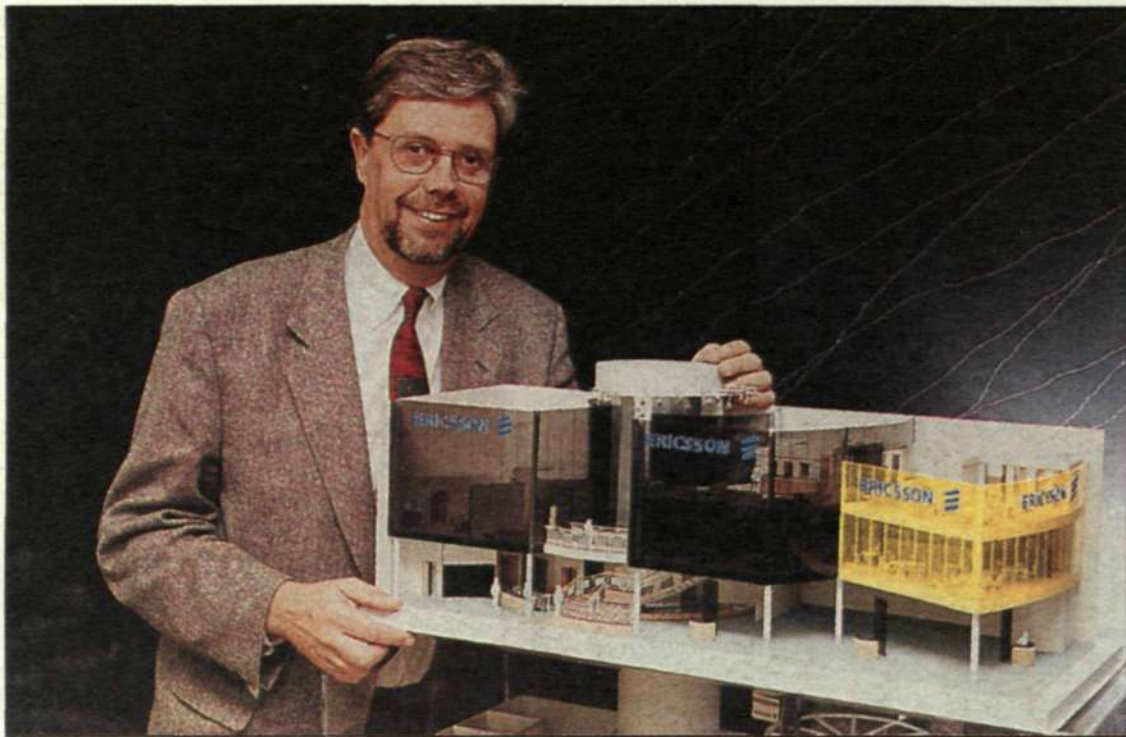
Photo: Søren Wesseltoft

## Smart move in Denmark

Ericsson A.S. in Denmark has one of the largest AXE test facilities in the Group. It is also one of the most efficiently utilized.

Through careful planning and ingenious solutions, use of the 26 test channels at the facility increased sharply.

9



Ericsson will have one of the most attractive locations for the Telecom fair in Geneva on October 3-11, explains Arne Johnson, in charge of Ericsson's participation in the fair. Photo: Peter Nordahl

## Time for the "World Cup in Exhibits"

It's been called the "World Championship in Exhibits" – the Telecom fair that takes place in Geneva once every four years. This year, on October 3-11, it's time once again for the world's telecommunications to convene and display the latest technology and, most importantly, meet one another. Ericsson is one of the largest participating companies.

Ericsson has participated from the very start; the first fair took place in 1971. The fair has grown steadily since its humble beginnings, with the exposition area this year breaking all previous records – about 95,000 sqm or 14 football fields! – and an increase in the number of participants to 520 from 35 countries. The number of visitors is also expected to increase; estimates indicate that 130,000 people will visit the fair during the nine days it is in progress.

The fair is arranged by ITU, the International Teleunion. During the four years between the Telecom fairs, ITU arranges expositions in North America, Asia and Africa.

In addition to the enormous exposition, Telecom 95 is also a conference. It will be divided into two main topic areas: Strategies and Technology.

### Important meeting point

Responsible for Ericsson's participation in the fair is Arne Johnson, Manager of Ericsson Events.

"Competition for the best locations in the exhibit hall is always stiff. This year, we have landed a prime location. Our closest neighbors will be IBM and Alcatel.

"Our exhibition area will be three stories high," explains Arne. "The ground floor is 511 sqm and the other two are somewhat smaller. The first two floors are for our visitors and the top is solely for our employees, with space for resting, eating and working."

Using studies performed at earlier fairs, Ericsson has obtained thorough knowledge of what is most important for visitors.

"They come partly to see what's new in the field. But of increasing importance is use of the fair as a meeting point," according to Agneta Bonde, who is responsible for the internal communications in conjunction with Telecom 95. "We have taken this into consideration when designing our exhibit. Only one-fourth of the area is designated for displays. The rest is conference and restaurant space."

### Competent personnel

Another important lesson learned from earlier fairs is the roll the personnel play in achieving good results.

"The exhibition space is like a stage that is very dependent upon its actors," says Arne Johnson. "Therefore, we place great emphasis on selection and training of the exhibition personnel. They should not only possess excellent knowledge of both Ericsson and the message we want to convey, but also have the skills to interact professionally with people."

"The physical environment in a fair of this size is really inhuman," says Arne Johnson. "The heat and noise levels, combined with a innumerable impressions, are almost unbearable. That's why we are investing in making the environment in our exhibition area as comfortable as possible with air conditioning and soundproofing."

Otherwise, the project group is trying to maintain a very cost-ef-



Agneta Bonde is responsible for internal communications in conjunction with Telecom 95. Information is distributed via memo/fax to:

- Ericsson companies: President/Corporate Communications Manager
- Business areas: President and Communications Manager
- Corporate functions

fective approach. Some competitors spend ten times as much on the design of their exhibition space.

"Our ambition is also to be able to re-use as much of the display material as possible," says Arne.

### Conveying visions

By the time it is over, around 500 Ericsson employees from all over the world will have participated in the fair at some point.

Aside from the exhibition at the fair itself, Ericsson will also have access to rooms in a nearby hotel, with space for smaller displays, conferences and informal meetings.

On top of this, a large reception for approximately 1,000 guests will be held during one of the evenings.

The objective for Ericsson's participation in the fair is to be perceived as a company that understands the needs of its customers better than any competitor.

Lena Granström

## And the GSM success goes on

**Ericsson's success with GSM continues. The steady stream of subscribers to the new digital mobile telephone systems worldwide have put operators on the move.**

**Expansion of existing networks are necessary in order to meet capacity requirements. This is now becoming evident in Ericsson's order books.**

### ■ UK: 255 million

Cellnet in Great Britain has granted Ericsson yet another contract for GSM switchboards. The contract is initially worth SEK 255 million. Cellnet is Great Britain's fastest growing mobile network, with 1.6 million analog and digital subscribers.

### ■ China: 750 million

Guangdong Mobile Communications Corporation in China has chosen Ericsson to be the supplier of the region's GSM network. The contract, which is worth SEK 750 million, enables the operator to build a mobile telephone network in the entire province for 400,000 subscribers.

Ericsson had previously received an order to increase the network capacity to 100,000 subscribers, however, expansion will now continue at an even higher pace.

### ■ Turkey: 250 million

Ericsson has received an order for expansion of Turkcell's GSM network in Turkey. Turkcell will buy new switches and equipment for radio base stations for SEK 250 million. Experts from Ericsson's Turkish subsidiary will install the equipment during this year.

Turkcell's network has 75,000 subscribers to date, an amount which increases by 2,000 weekly.

### ■ Portugal: 300 million

Telecell, a Portuguese operator, has placed an order for expansion of its GSM network for SEK 300 million. The order contains new switches for the mainland and for the island of Madeira, as well as radio equipment. The goal is to increase the network's coverage and capacity, which is expected to have over 100,000 subscribers by mid-1995.

## Good start for Freeset

**Ericsson Mobile Networks BV in the Netherlands has received an order worth SEK 50 million for 10,500 Freeset lines from Ericsson Paging Systems in Sweden. The lines will be delivered by Telia to the Swedish market during the first half of this year.**

This is Freeset's single largest order to date and demonstrates Telia's confidence in the system. Telia expects to sell

around 30,000 Freeset lines in Sweden during 1995.

The second generation of Freeset telephones has received an international prize from Industrie Forum Design Hannover for excellent industrial design. Freeset will therefore be displayed in Industrie Forum's exhibit at the CeBIT Fair in March. The system will of course be a strong attraction in Ericsson's own exhibit at the fair as well.

## All set for CeBIT '95

**On March 8, the gates will open to the gigantic Hannover Messe exhibition area. It's time for CeBIT '95.**

Ericsson is one of the largest telecom exhibitors at the fair. Ericsson will display its wide range of expertise, with a special focus on the latest developments within broadband infrastructure, GSM infrastructure, mobile telephones and communication solutions for the corporate market.

CeBIT in Hannover is the world's largest annual telecommunications fair, held every March. The number of visitors last year was 700,000. Ericsson registered 4,500 visitors with business potential at its stand, an

increase of 24 percent compared with the preceding year.

This year, Ericsson will display most of its products, systems and services for wireline and mobile public and private communications.

Ericsson will also for the first time participate in the lecture series that will take place during the fair.

On March 9, interested visitors will be able to attend half-hour lectures on everything from personal telephony and modems to access products for broadband networks. Visitors attending the fair with customers can bring them to a lecture on their particular area of interest.

Maria Rudell

### ■ ATM approved in Germany

Deutsche Telekom AG recently approved Ericsson's ATM broadband system which was included in a field test in Germany. Now that the system has been approved, the ATM switch will be put to commercial use as a part of Telekom's broadband network, which is one of the world's largest.

The system that the Germans have approved is the first generation of the ATM platform developed by Ellemtel.

# Ericsson reinvests entire 1994 net profit

Ericsson had a good year in 1994. Profit was a record SEK 5.6 billion. Continued growth in profitability is expected in 1995.

"We've done well, but we need every penny," contends CEO Lars Ramqvist. He rejects any talk about an excess of profits that is current a headlining topic in the Swedish mass media. The current profit level is a necessity for Ericsson. The company needs even higher profits

Ericsson is in the midst of a strong expansion. Success in the mobile telephone field has been the engine driving growth during the past few years. Investments are required to expand and technical investments are a necessity to retain the fantastic market position in mobile telephony. On the other hand, there is a need to develop new products in other business areas, not the least within public telecommunications.

"During 1994, we invested SEK 20 billion in technical development, if we include related expenditures," says Lars Ramqvist. "This is more than any other Swedish company and more than any other in our industry. Nevertheless, this is a necessarily high level just now.

"We must conduct research and development in order to remain at the forefront technically, while at the same time, price, performance and quality of our products must match the competitors'. Continued growth is made possible only through continued market success - that customers buy our products. They make it possible for us to create new jobs.

## Need profit

Lars Ramqvist means that the conclusion is apparent. Without the heavy development investments in recent years, Ericsson today would be a smaller company, with much fewer employees. Now we are 76,000 strong within Ericsson, 6,000 new jobs were created in 1994.

"Growth costs money, we must continually invest in buildings, machinery and inventory. In 1994, Ericsson invested SEK 5,264 million. We had to take this money from our own assets, from this year's and prior year's earnings.

This is the background on which Lars Ramqvist rejects talk of excess profits.

"All such talk is totally false when applied to a respon-

## Ramqvist rejects talk of excess profits

sible industry such as Ericsson. We need our profits, we reinvest as much as we can. In this manner, the company can grow and offer real jobs to more people!"

### Society gets the most

"Let me explain just how our profit of 5.6 billion kronor is used", says Lars.

"The biggest part of the profit will be paid in taxes, in all 1,682 million kronor. In addition to this, the company also spends considerable amounts of money on salary taxes."

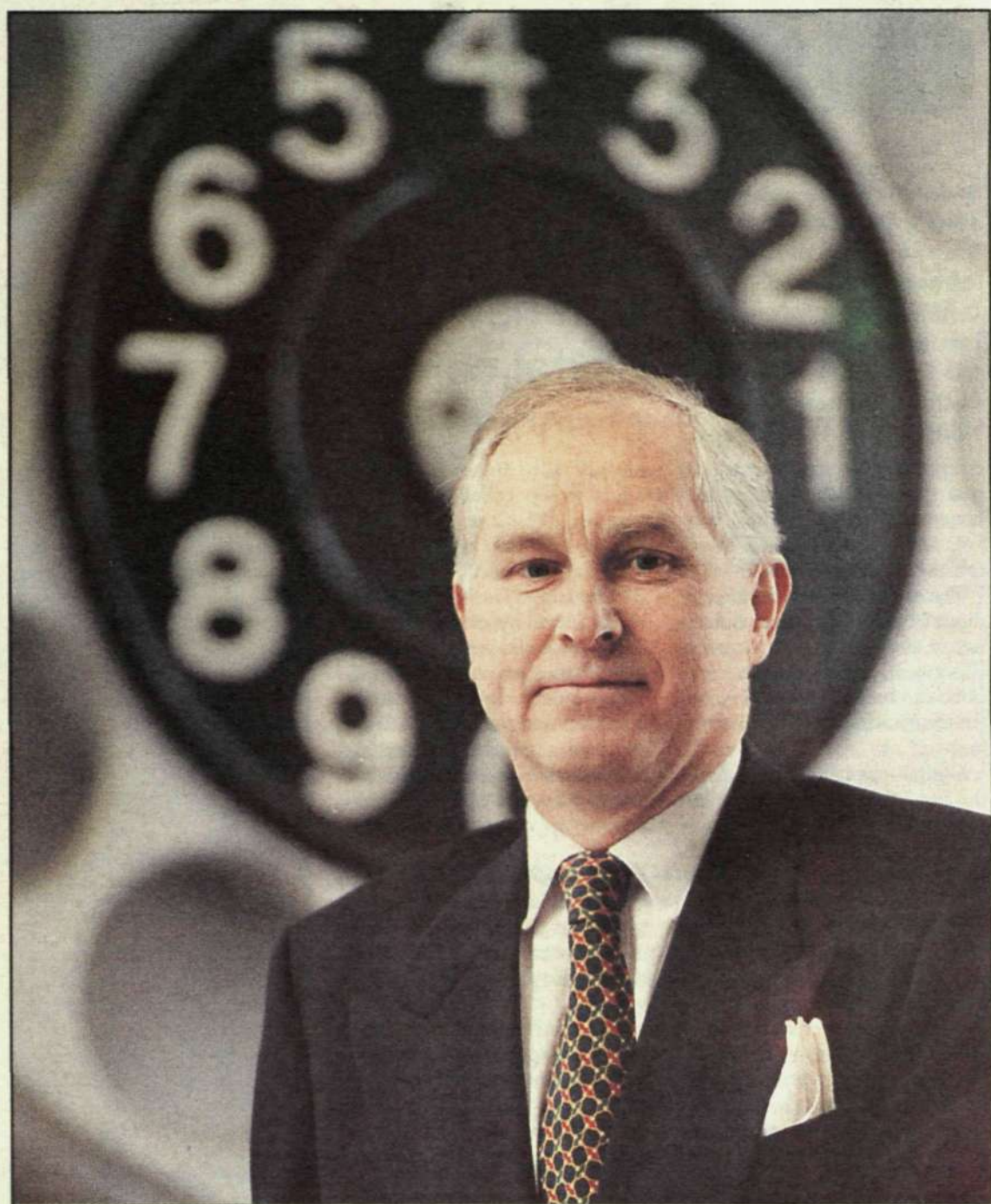
"Then the minority interest owners in the joint-ventures wants their share of the profit, this year 395 million kronor."

"The fact that Ericsson is growing is not only good for all of us working in the company," Lars continues. "It is also a prerequisite for the shareholders to continue to have faith in the Ericsson share. The dividend of SEK 5.50 being proposed for 1994 is not any great return on the capital that the shareholders invest. Actually, it represents only 1 percent in interest.

"The reason that people still purchase Ericsson shares is that the increase in value is attractive.

### THE 1994 PROFIT (billion SEK)

Net sales	82.5
Pre-tax profit	5.6
Taxes, 30%	-1.7
Profit after taxes	3.9
Minority shares	-0.4
Dividend to shareholders. SEK 5.50/share x 218 m. shares =	-1.2
<b>Remaining profit</b>	<b>2.3</b>



"A good economy for Ericsson makes it possible for us to invest even more in our employees," Says CEO Lars Ramqvist. Photo: Victor Lenson Brott

In turn, this value increase requires favorable growth of the company's operations. Since it is for growth that the profit is reinvested in Ericsson, the shareholders accept the continued aggressive investments in technical development. Otherwise, they would have demanded that a greater portion of profits be distributed as dividends.

"Now, there is only 2,366 millions left of our 5,600 million profit. All this - our actual profit - is reinvested in Ericsson."

"Maybe you are thinking that somewhat more than 2 billion is not that much to build the future and the jobs

on, in a company that has a turnover of 80 billions and was growing by 30 percent last year."

"I fully agree with you. Actually, we need an even higher profit to secure growth in the future, and to secure the jobs of all us working within Ericsson!"

### Personnel in center

"Moreover, I would like to emphasize that this strategy is also good for our employees, and not just because we create new jobs in the company. A good economy is the company makes it possible for us to invest in our personnel. They are our most important resource and therefore we want to invest in the know-

ledge and skills, flexibility and quality of the employees.

"The individual is personally responsible his or her skills and development, but the company wants to do everything to encourage the employee to make an effort themselves. This we do through paying for skills, responsibility and the quality of the work done," emphasizes Lars Ramqvist.

"Stated briefly, Ericsson places the employee in the center. You must do so in a company which has professionalism, concern for people and perseverance as its foremost values!"

Lars-Göran Hedén

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# D-AMPS completely digital

**In January, the second step was taken to make the American mobile telephone standard D-AMPS completely digital. Ericsson connected the first call with McCaw Cellular Communications, a Dallas operator.**

Every radio channel between the base station and the mobile telephone consists of a control channel, which connects and monitors the call, and a voice channel.

The voice channel is already digital, but now the control channel is also digital. In practice, this means that the mobile telephone can be used for paging and for transferring short text messages.

Digital channels also enable the use of coded messages and require less power when the telephone is not in use, which means that the battery lasts longer.

## Setting standards

The basis for the entire system is the latest version of TDMA (Time Division Multiple Access) technology in accordance with the IS-136 interim standard.

"Thanks to our own representatives who are a part of the development process for this standard, we can begin development before the standard is official, thereby decreasing our lead times," explains Kenneth Berg of the American Standards Mobile Telephone business unit.

## Package B

The project has the working name "Package B," which in Sweden is divided into a design

## Increased functionality with new digital control channel

project called Bravo Design and a test project called Corv1. All together, there are over a thousand people in six countries working on the projects.

"The Bravo Design project includes development of the new RBS 884 radio base station, in which the actual radio (transceiver) is a tenth the size of its predecessor and therefore a very competitive product," according to Kenneth Berg, who leads the Swedish portion of the construction project with Roger Hultén.

## Visible goals

A model has been built in Kista to serve as a barometer, in which the accumulation of building blocks illustrates progress in the project.

"We want to visualize the great technical leap forward now that we have succeeded in connecting the first calls here at our lab in Kista and in our field test in Dallas," says Lars-Olof Sundell, Project Manager for testing in Sweden.

He would like to express his thanks to all those who have contributed to this project.

"We're looking forward to a successful conclusion to the project with testing and market introduction this summer."

Lars Eriksson



Magnus Malmberg and Hanna Maurer testing the new digital radio channel. Functionality with other brands of mobile terminals is secured through a cooperation with Nokia



Reaching for higher goals. Lars-Olof Sundell places another block on the project barometer behind Roger Hultén and Kenneth Berg. They are running the Swedish portion of the Package B project together.

# Certificate for global quality

**The same quality worldwide for base station service of American Standard mobile systems. Ericsson's four service centers can guarantee this now that the first group of service technicians have received a certificate of their qualifications.**

"We have four service centers for our mobile telephone systems AMPS and D-AMPS located in the United States, Mexico, Australia and Sweden," explains Jan Söderblom, responsible for service center coordination.

The American center in Richardson, Texas, is the largest and the smallest is in Gävle, Sweden.

Each center handles a specific region. The U.S. center serves North and parts of South America, Mexico handles Central America, while Australia takes care of Asia. The Repair Center in Gävle services Pakistan and Russia. There are also three local service centers in Canada, New Zealand and Taiwan.

## Global customers

"We have global customers, that is, operators with mobile telephone systems in various parts of the world. They rightly de-

mand that quality should not be dependent on the service center that does the job."

The first eleven service technicians were certified this past autumn after six weeks of training conducted by Ericsson Inc. in Texas. The training was led by Ericsson personnel and consisted of two weeks of theory and four weeks of practice.

The first group of certified service technicians are from the U.S., Mexico and Australia. Even all of the service centers will be certified.

## Customer service essential

Customer service is becoming more and more important as telecommunication

markets are becoming de-monopolized and many new operators are entering the scene. New operators need support in order to develop and make use of their systems in the best way. Providing services is playing a more important role in system sales.

"Marketing personnel sell these services and we in turn have to make sure that we can deliver."

"Part of this is proving that we maintain uniformly high standards worldwide, which is done by certifying both our technicians and our service centers," concludes Jan.

Gunilla Tamm

# Top politicians discussed IT

**Electronic superhighways, virtual reality, internet and cyberspace are phenomena now being discussed at the highest levels of society. Recently, politicians from the seven leading industrial countries, the G7, met in Brussels to discuss the revolutionary changes that are leading us into the future information society.**

At the preceding ordinary G7 Meeting held in June 1994, it was decided that the EU Commission would host a conference with a special focus on the information society.

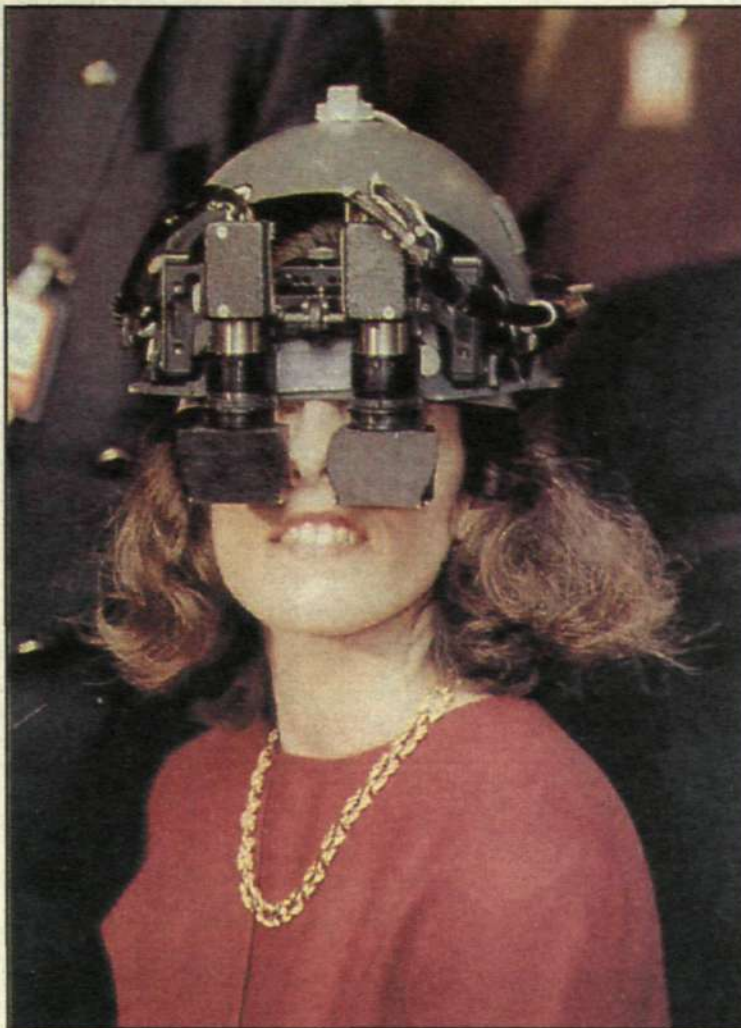
Subsequently, the world's leading politicians met for the first time to jointly discuss their common future. Held during the last weekend in February in Brussels, the meeting was attended by all countries in the G7 group.

## Future in practice

In connection with the conference, an exhibition was arranged where the participants, with other specially invited and the press corps, were given a first-hand view of the information society.

Ericsson was one of the exhibitors and was represented by Jaap Van Den Berg from Ericsson in the Netherlands.

Jaap presented the cordless office, and visitors were given an



During the G7 Meeting, visitors could test a virtual reality helmet which was linked to a camera in another part of the building. The camera was controlled by head movements.

opportunity to test the functions available with the DECT/Freeset system.

Other exhibitors included the Motorola and Nokia telecom companies, and mobility was the overall theme. Motorola presen-

ted the concept of "Communications for people in motion," and Nokia's presentation was based on the user benefits when Europe's mobile communications system is developed.

Pia Rehnberg

## Top leaders in historic meetings

**Industrial leaders from around the world met during the G7 Meeting to discuss the information society of the future.**

**Ericsson's CEO Lars Ramqvist participated in the historic meeting as the only representative from Sweden**

Some 45 industrial leaders from around the world came to the G7 conference to participate in roundtable discussions about information technology. Regulation and competition, technique and availability and social, community and cultural issues were discussed during the four-hour meeting.

The discussions among the leaders were based on four themes: development and demand; responsibilities and duties of authorities; international cooperation, and any possible risks associated with the technological revolution inherent in the information society. The discus-

sion will serve as a platform for recommendation to be presented at the next G7 conference in Canada in June.

## Private investments

Lars Ramqvist participated in the roundtable meeting. An issue which he presented dealt with investments. He contended that development toward an information society will require increasingly larger private investment, and proposed that standard regulations are required for dealing with private investment.

"The information society should make it perfectly clear that foreign investors in a country must be considered and be treated in the same fashion as domestic companies," Lars Ramqvist said.

Carlo Benedetti, Board Chairman of Olivetti, made a well-received and appreciated statement in which he contended that the information society must be developed based on people's needs, and this will require an investment in education.

Lars Ramqvist also emphasized the importance of deregulation and open competition in the telecommunications field. He presented the issue of common, international standards, and underscored that they must be based on market demands.

"They should not be permitted to function as trade barriers. Instead, international standards should reduce obstacles and product development costs."

## Social aspect

In conclusion, he emphasized the social, community and cultural aspects of information society.

"At Ericsson we are guided and inspired by a strong conviction that the global information society is firstly and most importantly about communication between people - the rest is technology."

"This was an historic meeting which provided us the opportunity to discuss future cooperation within telecommunications," Lars Ramqvist commented after the meeting.

## First order for PCS in U.S.

**American Personal Communications Inc. became Ericsson's first customer for a PCS system in the U.S.**

PCS, Personal Communications Services, is the new type of cordless personal telephony system which during the years ahead will be extended to most of the major population centers in the U.S. Licenses for PCS have been auctioned to interested operators since December.

The order from APC covers equipment for the infrastructure and is divided between Ericsson and Northern Telecom. This network will be construction in the Washington-Baltimore region

"Our goal is to be the first to have a commercial PCS system in operation in the U.S.," says

Wayne N. Scheele, Chairman of APC. "We hope to achieve this goal at end of this year and have already acquired 250 sites to install base stations."

The equipment Ericsson and Northern Telecom are supplying is the PCS1900 type, a technology based on GSM but adapted to conditions in the U.S.

Ericsson will deliver the switches and radio base stations for the Washington-Baltimore area, while NT will be responsible for the equipment to the coastal region in Maryland and the western regions of the APC's license area.

APC's market covers Washington D.C., most of Maryland, large parts of Virginia, West Virginia and Pennsylvania. A total of 8 million people live in the area.

## Bengt Halse moves to Saab

Once again a top executive from Ericsson has been recruited to a top position in another Swedish company.

Bengt Halse, head of the Microwave Systems Business Area, has accepted a position with Saab as president of the aviation company in the restructured Saab-Scania.

Jan-Åke Kark has been appointed to succeed Bent Halse as head of the business area and president of Microwave Systems AB.

Kark comes from the EP Consulting Group in Karlskrona. EP, which has grown sharply in recent years, is an Ericsson software company.

## Mobile net expanded in Moscow

VimpelComm is a telecom operator with an AMPS/D-AMPS mobile telephone network in Moscow. Recently, the operator awarded Ericsson its largest single mobile telephony order to date in Russia. The order covers expansion of the

VimpelComm network to a capacity of 50,000 subscribers. The network will then cover central Moscow as well as surrounding areas.

Currently, Ericsson has six AMPS/D-AMPS systems in operation or on order in Russia.

## Durable telecom cable to railways

Ericsson Cable's telecable division in Hudiksvall has signed an agreement with the Swedish National Rail Administration covering continued supply of telecable during the next two and a half years. The contract is valued at SEK 50-60 million.

The cable is of a new design. It is designed for tough environments and is particularly suited to the Swedish climate. It is an optical fiber cable with not metal components and is not affected by interference from nearby electrical installations.

## Radio take over in Nynäshamn

The manufacturing units at the Ericsson plant in Nynäshamn will be transferred from Public Telecommunications to the expanding Radio Communications business area. The exact date for the transfer has not been decided. However, effective immediately, the Nynas-

hamn plant is starting with the subcontracting of antenna related products from Ericsson Radio Systems in Kista. The AXE production carried out at Nynashamn today will be gradually transferred to other production units within Ericsson Telecom.

## GSM expansion in Turkey

Ericsson has received an order for the expansion of the Turkish operator Turkcell's GSM network. The order, valued at SEK 250 million, covers new switches and equipment for radio base stations. Installation

will be carried out during 1995 by Ericsson's Turkish company. Today, Turkcell operates the largest GSM network in Turkey. Placed in commercial operation in February this year it now has 75,000 subscribers.

# Teleworking from your home

"Working at home is not something I would recommend for lone wolves," says Alberto de Castro. He should know. Since 1992 he has been living in Örebro, although he works in Stockholm more than 100 km to the south. He is thus a teleworker, and he is definitely not a lone wolf.

Alberto lives on a quiet area just outside the center of Örebro. The houses are from the late 1950s and are owned primarily by retired persons. The neighborhood is peaceful and is an ideal work environment.

"This is definitely one of the advantages to working this way. A lot of disturbances are eliminated, and I can avoid many unnecessary meetings," says Alberto, while setting out cookies and cake for afternoon coffee in his kitchen. His three-year old daughter Carolina, who has a cold and is home from day care today is taking her afternoon nap in her bedroom on the floor above.

In 1992 Alberto thought that he would be forced to resign his position with Medex Design at Ericsson Telecom. His wife, who is a civil engineer was offered an attractive position in Örebro by her company, AGA Gas AB.

"I am really glad that she has been so successful in her career. She's really good at what she does," says Alberto with pride.

## Workmates' idea

The move to Örebro was planned at Christmas time. Thereafter Alberto was to take a parental leave of absence and remain at home with Carolina. But his workmates, who are part of a group responsible for "Modification Handling," had a different idea. Their proposal was that Alberto should work remotely from Örebro, and Alberto, who likes his work at Ericsson and the positive spirit in the company, made the proposal to his superior, Leif Jansson. Leif saw it as an interesting experiment.

"Alberto is a highly skilled and valuable employee, so we didn't want to lose him," says Leif. "We agreed to a six-month trial period during which he would work three days a week from his home in Örebro and two days in the office in Stockholm. A contract was drawn up regulating the conditions."

## Home office

A PC was purchased and connected to the Ericsson network. An extra telephone line was ordered at Ericsson's expense. Alberto was also able to borrow some office furniture, including a desk, book shelves, a computer table and a chair.

"For me it was important that this room looks like my office and that it is different from the rest of the house," says Alberto. "I am also very strict about being

## Alberto teleworks three days a week

here between 8 and 5 and always being available to those who need to reach me."

Alberto appears to have been successful in this effort. Leif Jansson notes that it is often easier to reach Alberto than employees working in the office, because they spend more time in meetings. For the most part, Alberto is also the one who responds most rapidly to Memo messages sent to a group distribution list.

Alberto does not always make a sharp distinction between work and leisure time. He and Maria often discuss their work in the evening when Carolina is asleep or at times on weekends. Maria is also often the one seen typing on her portable PC doing a few hours work at home. Where work is performed is not important. It is more important to have an interesting job that is a part of one's life.

## Less travel time

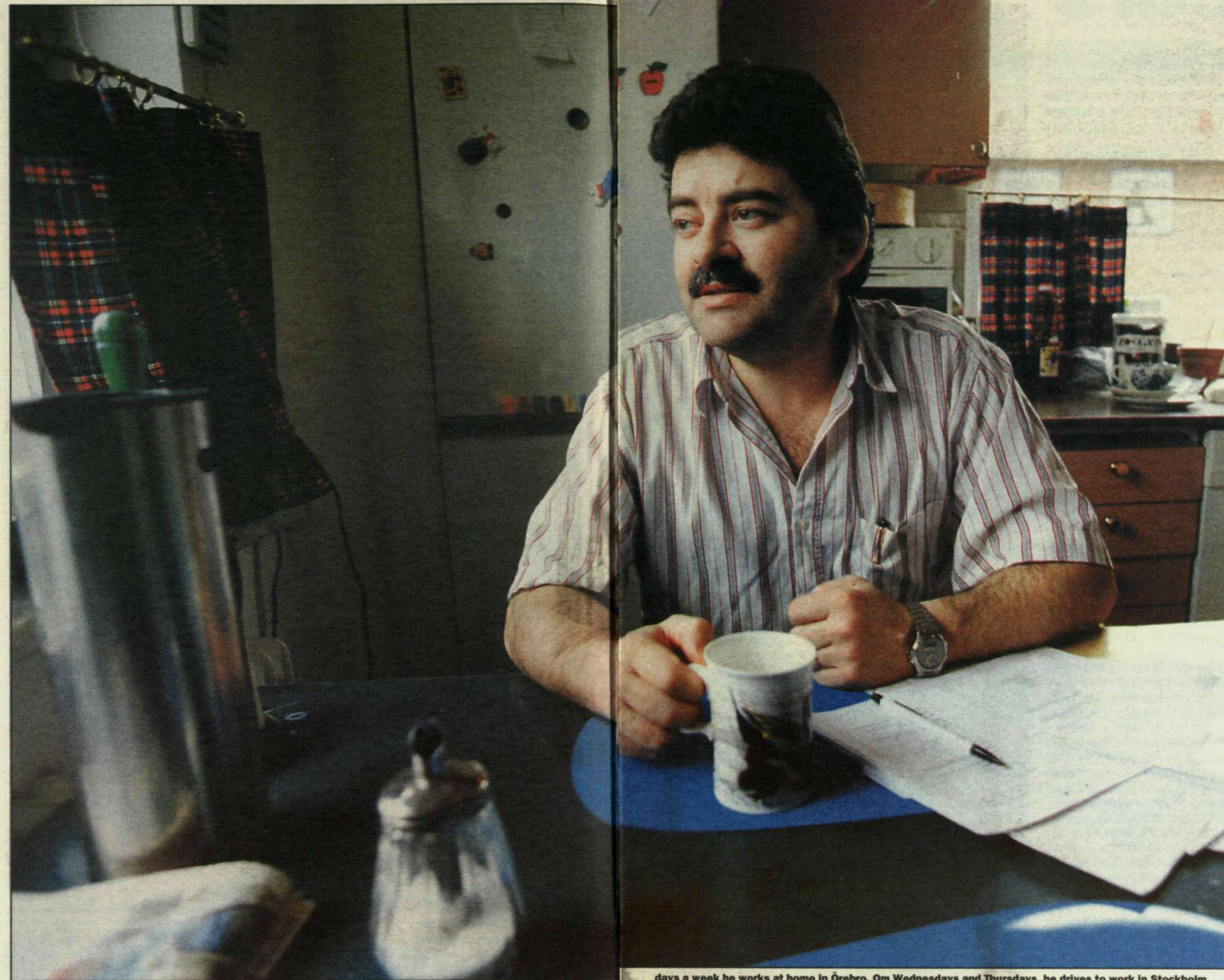
Traveling between Örebro and Stockholm takes about two hours, so Alberto's total of four hours' traveling time each week is actually less than that of many Stockholmers.

Alberto's job is to develop process descriptions and documentation instructions for the development of the AXE system. This means that he spends much of his time in front of the computer. However, he also has a lot of contact with other technical documentation specialists within his unit, with a group outside the unit, and with printers and other suppliers.

He tries to schedule meetings on Tuesdays and Wednesdays when he is in Stockholm. Sometimes he is forced to stay an extra day, but sometimes meetings can be held in Örebro. By being flexible and taking advantage of technology, almost anything is possible.

## Less influence

"The greatest disadvantage to working this way is that I have less influence," says Alberto. "And if there is anything that is difficult for people of my generation born in the 1960s, it is keep-



"It is just not possible for both parents to pursue careers when you have small children. Right now Maria is the one who is able to develop her career," says Alberto de Castro. He's been a teleworker since 1992. Three

ping quiet. I usually have an opinion about everything. If I think a decision is crazy, I say so.

"Another disadvantage is that there are fewer opportunities for development in my work. I cannot take part in courses and I am not among the first choices in recruitment for more stimulating jobs.

"But for the time being, these are options from which I am willing to abstain. It is just not possible for both parents to pursue careers when you have small children. Right now Maria is the

one who is able to develop her career," says Alberto.

## Contracted trial period

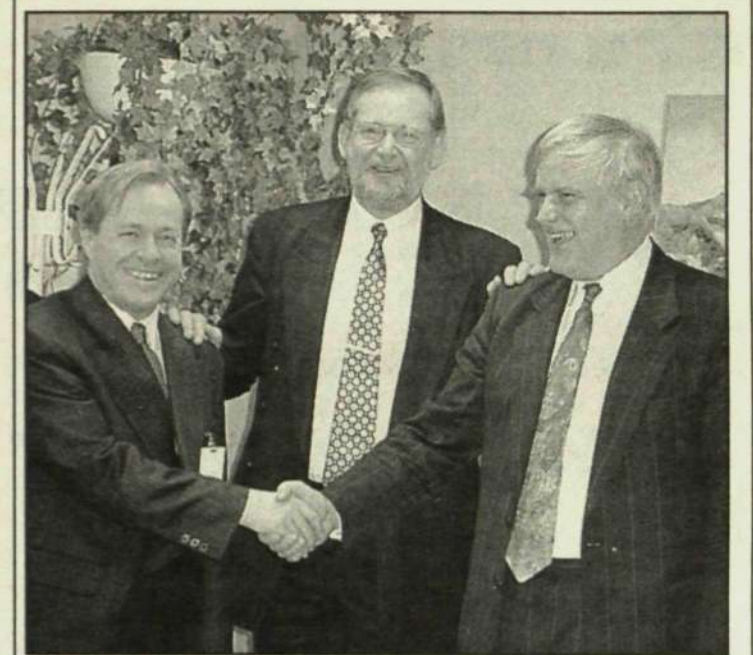
"Working from home may not suit everyone," Alberto observes. The prerequisites are that the employee can exercise self-discipline and is willing to do the best for the company.

It is also important to be sociable, to have a network of contacts and to be accepted in a group that is supportive. Alberto and Leif also both emphasize the importance of a contracted trial period

that is then evaluated by both parties.

"It's really a question of confidence," says Leif. "Working from home requires self-discipline and a sense of duty on the part of the employee. The trend today is away from control and time clocks and towards freedom with responsibility. I judge success on the basis of project results and of measure satisfaction by the lack of negative signals.

"I could certainly consider having more employees working from home, but this is not a goal.



Staffan Svensson (left) from Private Radio Systems finalizes the cooperative agreement with Nils G Pierre from Ericsson Telecom A/S. Overseeing the procedure is Stenar Tveit (middle), president of Ericsson Telecom A/S.

## Combination of telephony and radio a powerful solution

**When two Ericsson business units target the same customer group, they usually want to combine their strengths. And if you're really good, one plus one just might be three. Greater strength in numbers, you might say.**

This was at least the idea that Nils G Pierre at Ericsson Telecom A/S in Oslo and Staffan Svensson at Radio Systems in Kristianstad had when they began to talk about combining their strengths. Nils Pierre heads Ericsson Norway's division for private networks. The division's product portfolio includes systems for MD110 CS, a system for control communications that has been sold to police departments, airports, power stations, rescue services and other users around the world. Staffan Svensson is the manager responsible for international marketing of Private Systems and also markets the closed-system radio EDACS to the same customers.

## Customer requirement

Both parties agree that the prospects for cooperation are excellent. The EDACS system is radio-based, while the CS system is a special application for the MD110 subscriber exchange. Most customers want a combination of telephony and radio when they are looking for a system that provides maximum efficiency, reliability and availability. Sales personnel working with telephony thus often receive requests involving combinations with radio and vice versa.

Cooperation thus seemed natural. The two parties have now reached the point where they are now introducing a combin-

ation based on EDACS and MD110 CS at CeBit in Hanover, Germany in the beginning of March. The final touches are now being made on the marketing campaign and forms of collaboration in projects of common interest.

## Without rival in Europe

"This combination of radio and telephony is probably without rival in today's European market," says Staffan Svensson. "On both sides, we are working in a narrow but dynamic market segment, and I am convinced that this cooperation will strengthen Ericsson's position."

His colleague Nils Peters Pierre agrees completely. "We will work together on new projects throughout Europe. As an example, this will increase Ericsson's chances of being included in a number of very attractive airport projects now being tendered in various countries.

## Norwegian police trials

The Norwegian police are an excellent example of another attractive customer group. For the Olympic Games in Lillehammer Ericsson supplied a sophisticated EDACS system to the Norwegian police. According to project manager Steinar Jønsen, this system was a key factor in managing this gigantic undertaking.

Since then, the EDACS system has moved from Lillehammer to Oslo to the command center at Oslo police headquarters. At the same time, the Oslo police department has signed a contract with Ericsson for a number of MD110 CS exchanges. In a test installation at Oslo police headquarters, the EDACS and the MD110 CS systems have been linked, and the results thus far are very promising.

Paul Falck

It must be the case that working or family conditions make it necessary.

## Örebro is not forever

Alberto and his family enjoy their lives in Örebro. Maria has an aunt and several cousins in the area that she often spent summers with as a child.

Alberto likes Örebro because it has the advantages of a city while putting everything at a convenient distance. Yet the family is already thinking about breaking up.

"We will not stay in Örebro for the rest of our lives," says Alberto. "At some point we will have to move, either back to Stockholm or abroad."

Alberto, who came to Sweden from Portugal as a refugee in 1970 is curious to see how his new homeland is viewed in the eyes of others.

Ericsson has local companies in many countries, and Maria's company also has international operations.

"In any case, I want to return to working full time in Stockholm,"

says Alberto. "I would certainly like to be able to work from home from time to time with special assignments that demand peace and concentration, but being able to influence decisions and participate in training requires being in the office," concludes Alberto.

Alberto waves from the front steps as we leave. He then turns to go up to Carolina on the top floor, who has slept throughout our conversation.

Text: Lena Granström  
Photo: Lars Hansson

# Synergy without Tears

At the end of the 1970s, Ericsson attracted attention for its solid system expertise. That position laid the foundation for the enormous success of the AXE system. Then a decentralized development organization was built. The organization satisfied customers' demands for local adaptation of technology, but the centralized control of system development weakened.

Now the pendulum is swinging back to stronger central management of system development projects. And that demands strategic decisions on what technology Ericsson should develop on its own.

Ericsson's new, centralized technology organization is getting up speed. A new function is Core Systems Management (CSM). Behind this title you will find a unit that will assume responsibility for managing Ericsson's system development. In collaboration with the system management functions of the line and business areas, this unit will coordinate all development activities related to Ericsson's core systems.

Jorma Moberin heads the unit. His previous experience as technical manager at Ericsson Telecom taught him that there is much to be gained from better coordination of system development. And that coordination cannot be controlled by centralized group management.

## Networks

"I have learned that a centralized organization for technology development doesn't work. Over time it becomes removed from reality and gradually loses respect out in the organization. Simply put, it eventually loses control," Jorma says. "That's why this new system management is being based on a network model. CSM's role will be to serve as the junction for various networks, to relay experience and skills between various parts of the group. By tying together the whole group's system development this way, Ericsson can retain its position as the leading company in the industry in the area of system architecture."

## Open architecture

Ericsson's new policy book, currently being printed, has assigned system and product development their own chapter. The pol-

icy applying to this area in the future constitutes to a great extent a new approach.

"In that policy, Ericsson commits itself to open system architecture and standards. That is an important statement, because an open system philosophy can mean a lot for the future of Ericsson."

Jorma explains, "In the new era we live in, companies that focus on open systems will be the most successful. You can see it in the computer industry, where open systems have paved the way for the achievements of the industry leaders.

"Open systems are also demanded by the market today. Customers don't want to tie themselves to a single supplier. Nowadays, standards and independence from suppliers are paramount."

## Help from others

The second important stand management has taken on system and product development policy concerns what Ericsson should and should not do. Policy clearly states that the group should concentrate its leading expertise on creating new systems and products in fields where the company surpasses all others.

"We just have to do what we ourselves are best at and get help from others when we're working on more standardized building blocks in our systems. This reinforces the emphasis on open systems. Ericsson doesn't want its purchasers of external technology to become too dependent on one or two outside suppliers either!"

Getting help from other companies in devising vital elements of Ericsson technology is some-

thing of a break with the company's traditions in system development. But there is no doubt that Ericsson can develop new technology faster and at a lower cost this way – without sacrificing quality.

"Everyone agrees that our current expenditure on technology is too high. That's why management is so interested in external sources of technology. It's an extremely smart way to reduce costs. But we have to make sure that we truly master the art of intelligent technology procurement and make the right decisions about when to get outside help and when to go it alone."

## Recycling

Another important task for Jorma Moberin and his colleagues is to encourage the various technology centers and development projects to share their experience. Networks play a major role here, of course, but CSM will also actively serve as a kind of "internal sales department" for other group's expertise. Someone working on a development project who has run up a blind alley or who is choosing between different system solutions should be able to learn from CSM where to find the expertise that can help with that particular case.

"We know that it's not at all unusual for two or more people in different units to be stuck on the same problem. We also know that the solution to their problem is often already available somewhere in Ericsson – somewhere else, of course. There are enormous cost savings to be won here," Jorma believes. "Recycling finished designs is one of our main goals here at CSM but it makes certain demands on how we construct our systems."

Jorma Moberin emphasizes the need for creating more unified architectures. That is crucial for being able to move logic between systems. "This is an opportunity that Ericsson has not yet fully exploited, maybe because we haven't built our systems in a way that facilitates recycling. But today, the computer industry and software development are showing us the way. One of the biggest advantages of object-oriented programming techniques is the possibility of using different sections of a program more than once."

## Gathering knowledge

The example of recycling reinforces the need for an overall perspective on the Ericsson's system development. With a technology organization as decentralized as Ericsson's, someone has to have a bird's-eye view.

"Today Ericsson is organized according to the product areas and markets we currently know about. When systems of the fut-



Jorma Moberin, left, and his colleagues Ulrica Hanebring and Thomas Lindquist are curious to find out what impact the specially furnished CSM room will have. Here they are going to conduct concentrated pro-

blems solving, by gathering handpicked system experts from throughout the group to focus on specific problems for one or two weeks.

ure are a reality, the scene might be completely different. That's when a function like ours is of the greatest value, one that gathers knowledge from all over. What we are sure of now is that Ericsson is well-prepared in the field of systems.

"AXE is unequalled worldwide as a system that has been

able to survive and be developed more than any other," Jorma points out.

"It has been able to shed its skin over the years, with new and more modern versions of the system. And we know that the AXE will survive quite a ways into the next century. We know that there are no risks of running into a wall

## Networks are the model

The model of how Ericsson's technology activities will be managed in the future that Anders Igel devised during the course of 1994 has as a key concept the construction of networks. Where centralized control, or no control, left off yesterday, networks will take up today.

The corporate function Technology and Production is something of a network. Heading the various areas of responsibility for the function today are people with wide-ranging experience of operational tasks. Jorma Moberin is one of those. For many years, he has played a leading role in dealing with technology in the Public Telecommunications Business Area, recently as head of the core unit for Basic Systems.

"It is very important for those of us in the corporate management functions to work together, so that we can act as an integrated team. Together, we can provide total support for those out in the organization who need help, in a way they have not been used to," Jorma says.

## Multifunctional groups

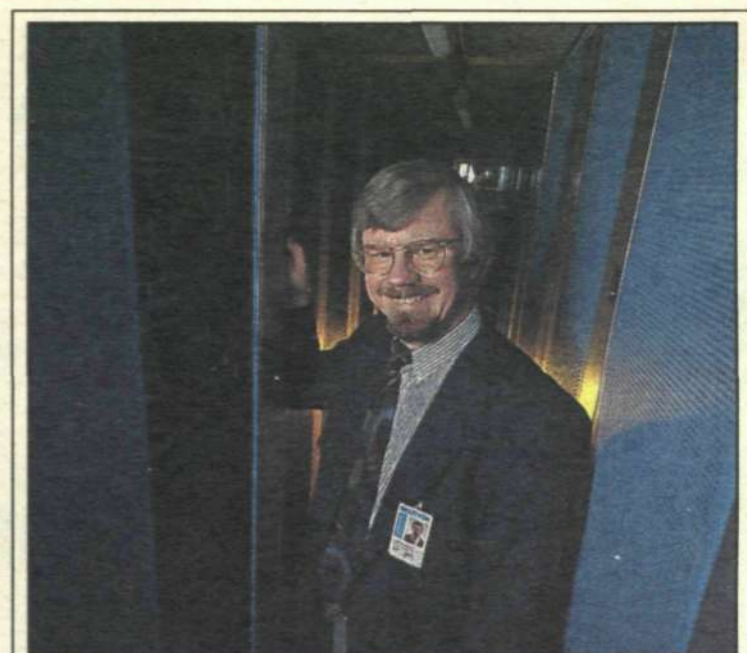
The networks now being constructed for system management comprise system expertise from Ericsson companies and from the business areas. A network is being built for each business area, with formally assigned participants. Each business area's technical manager has the ultimate responsibility. Together these managers make up the Ericsson System Council (ESC). The council serves as an advisory body and as a platform for creating consensus on important system issues.

Jorma explains, "For example, those of us working at CSM can make sure everyone is in agreement on strategies and priorities. Multifunctional groups will be formed to assist others with system problems, for example, or when help is needed somewhere making important technology choices."

## Avoid "selling"

"We can achieve the best results by coordinating and using the operative system expertise in the line organizations. And by basing our activities on cooperation, we achieve more than that. We also avoid having to 'sell' our ideas to the technology organizations, which we would have had to do if we focused on a completely centralized model for system management. Trying to steer system developers with a staff function along the lines of classic business theory is pointless."

Lars-Göran Hedén  
Photo: Kurt Johansson



"We have significantly enhanced the use of our test site during the past year," Ebbe Thygesen says. Photo: Sören Wesseltoft

## Danish ingenuity saves test money

Through better planning and by using the AXE's safety margins when needed, Ericsson in Denmark has succeeded at significantly expanding the capacity of its large AXE test facility. Instead of adding to the facility, they divide each test channel into two channels as needed.

actually determine the configuration each test needs. Now and then a test requires extra capacity. In those cases we have been very successful at making use of the fact that a test channel in AXE is actually two channels. As in real AXE stations, each channel is doubled for security, so if you can ignore that backup in a test situation, you can double the capacity of your system.

"It's not quite as easy as it sounds, but the bother of reconfiguring the system this way is minimal compared to the money we save creating that extra test capacity."

One of the most expensive phases of software development is testing programs in a test system. So the people at Ericsson in Denmark, which has one of the largest test facilities outside Sweden, have recently done a lot to improve utilization. And they have had excellent results.

In 1993, on average 71 percent of time reserved was utilized. Today, all reserved time is used, and more. Despite more activity in 1994, they were able to expand the test system without costly investments.

## Better planning

Their success is the result of vigorous efforts by the department responsible for the test facility. Ebbe Thygesen, manager of the department, explains, "We use a lot of resources to plan the allocation of different tests so that our 26 test channels can be used at an optimum. The time we spend on that planning pays for itself many times over. We also keep in close touch with our users. We continuously measure how satisfied they are with our service."

"It's worth noting that our users are just as satisfied today as they were one year ago. So the heightened efficiency we have achieved hasn't been at the cost of customer satisfaction."

## Flexible system

"We run a very flexible facility where we can quickly and ex-

## Fully booked

Ebbe Thygesen continues, "Another important reason for our success is that the hardware is located in a separate room, where only support staff have access. So we can always control how the equipment is configured and can be completely sure that it is running at peak performance."

All test channels are reserved to 100% during regular working hours. To prevent any projects from falling behind schedule because of errors, the department now offers around-the-clock hardware support. Hence, tests can run more or less 24 hours a day.

## Satisfied users

But what do users say about the Danish site's novel approach? Jeff van der Brink, from Ericsson in Australia, spent three and a half months in Denmark last year to perform functionality tests for the FMP3 project.

"Utilization is excellent. Administration and maintenance of the site are topnotch. Also, only a few people work on test channels at the same time. At other sites, you're forced to share a channel with several others, and that's not always the most effective way to get your job done," Jeff van der Brink says.

Jens Ramskov

# A game with billions in the pot

Patents are no longer solely the concern of research and development personnel. Today, well-written patents covering entire systems are one of the prerequisites for being able to maintain commercial freedom of action on the market.

While companies could previously agree conditions for the exchange of patented information, patents have now become the pieces in increasingly hard-fought games of "patent chess."

Ericsson is in the process of strengthening its IPR activities in order to keep pace.

## The battle for patents — a high level game of chess

Intensive work is currently in progress throughout Ericsson to strengthen and develop the handling of patents and intellectual property rights (IPR). Lennart Grabe, Senior Vice President, Corporate Business Development, has been following international developments on the IPR front.



"Technically simple or mediocre ideas may have a high exchange value," says Tage Lövgren, head of Ericsson's corporate patent and trademark unit.

"Patents are assuming increasing importance as a means of maintaining Ericsson's commercial freedom of action," comments Grabe.

The more aggressive stance with regard to patents has become increasingly pronounced during the past few years.

"Until the mid-1980s, contacts relating to patents and licenses between various companies active in the market were relatively friendly," recalls Grabe. "The reversal of this situation in the past few years has been most sorely evident in new areas such as mobile telephony."

### Used as a weapon

It is primarily U.S. companies that have set the tone, partly, of course, as a result of efforts to secure a stronger position vis-à-vis Japanese companies. There has been a desire in the U.S. to protect and exploit ideas originating in the U.S. and transform them into commercial products, rather than stand by and watch the practical applications being developed in Southeast Asia. The patent weapon has also been deployed against European companies, including Ericsson, partly to generate revenue from licensing agreements and partly to gain an ad-



vantage in strategically important business segments in various markets.

**GATT issue**  
"The U.S. has taken a hard line on intellectual property rights, both in the GATT talks and in bilateral negotiations," continues Grabe. "The U.S. negotiators have attempted to establish guidelines and conclude agreements that are compatible with U.S. legislation."

The patent instrument in its traditional form came into being during the first decades of industrialization, more than one hundred years ago. Consequently, a patent normally related to a specific product such as a ball bearing.

Now the concept of the patent is being broadened to include what might be termed "knowledge patents" and "service patents."

"Pressure from commercial interests is increasingly forcing the patent authorities to also agree to patenting of software programs," says Grabe.

It follows that for Ericsson, which has developed from a traditional industrial company into a knowledge-based company with heavy emphasis on research and development, the patent issue has steadily increased in importance.

IPR activities are being strengthened in a number of ways. More patent engineers are being recruited and trained. Patent issues are being prioritized and have become a natural component of most projects, as well as forming part of every line manager's commercial responsibilities.

### IPR policy

Corporate management at Ericsson is currently drawing up a new IPR policy document which will supersede previous documents on the subject. There are also regular meetings at which

senior managers responsible for IPR exchange information with business area representatives.

"Each business area must have a clearly defined procedure for handling patent-related issues," says Walo von Greyerz, corporate lawyer responsible for intellectual property rights at Ericsson.

He appreciates the difficulty of making a commercial evaluation of the results of research and development work.

"In many cases, potential applications lie in the distant future, making it extremely difficult to gauge the value of any patents that are taken out. But patents can provide the basis for standards, and a patent covering a standard to which other companies have to adhere is an extremely valuable property."

### Not for engineers only

A wide-ranging step-by-step information program is currently under way throughout Ericsson to increase awareness of the importance of patents.

"Patents are not the exclusive concern of systems engineers," underscores Tage Lövgren, head of Ericsson's corporate patent and trademark unit. "A secretary or sales assistant could conceive an idea that is patentable, though the help of an engineer may be needed to actually compose the patent application."

"The value of a patent is not always measured in terms of technical ingenuity or uniqueness," Lövgren points out. "The value of a patent often lies in its potential as a bargaining chip, or in the protection it can confer."

### Safeguards

Another aspect of patents at Ericsson is the duty to safeguard ideas patented by others.

"It has happened that we have discovered the existence of patents that have necessitated redesigns in order to avoid patent infringements or high license costs," continues Lövgren.

"Part of our work is to identify such patents at an early stage, in order to avoid subsequently ha-



## Important to apply for patents in time

Ericsson Radio Systems has several years' experience of the rough-and-tumble play that patent applications can sometimes involve. This valuable knowledge is now being dispersed throughout Ericsson. At Ericsson Components, patents are now an integral part of product and project planning.



"We have first-hand experience of the increasingly rigorous patent climate," says Göran Nordlund at Ericsson Radio Systems.

"Thus far, we have escaped a direct assault based on patents," says Bert Jeppsson, president of Ericsson Components. "We have a patent portfolio, but it needs to be better to enable us to trade patents in negotiations and to defend ourselves against blocking maneuvers by other companies."

days, the costs for patent work are included in the budget from the outset," says Jan Johansson.

### Too late

Kåre Gustafsson, head of the Microelectronic Access Devices research center at Ericsson Components has many contacts in the research community outside Ericsson.

"We have experienced problems despite having excellent patent coverage," continues Kåre. "We must work on a long-term basis instead of waiting until a product is almost finalized before applying for a patent. In order to broaden our portfolio of system-based patents and concept patents, we must focus on patents at an earlier stage of development work."

### Seminars

Sten Hedberg, who is responsible for intellectual property rights at Ericsson Components, is continuously working to fine-tune the company's patent organization.

"I conduct seminars on what patents are and why we should acquire more of them," says Sten.

The task of creating a more clearly defined patent organization at Ericsson Components continues unabated.

"All projects must be closely examined in order to identify anything that could form the basis of a patent," continues Sten. "Then we help with the preparation of a patent report for submission to the corporate patent unit, which processes the information into a patent application."

### Insight at Radio

It is an accepted principle at Ericsson Radio Systems that early patent applications and patents incorporating standards are of crucial importance strategically and commercially. Göran Nordlund is a member of the management group and has overall responsibility for issues relating to intellectual property rights.

"We have first-hand experience of the increasingly rigorous patent climate," says Göran.

Having worked on development of a new worldwide market for mobile telephony, employees at Ericsson Radio Systems have already encountered most of the difficulties that are now beginning to affect other market areas.

Substantial parts of the patent program now being implemented at corporate level already exist at Ericsson Radio Systems.

### Natural with patents

Ericsson Radio Systems has had a patent support unit for the past ten years. There are two principal reasons why Ericsson Radio Systems is so far ahead in regard to patents. The first is the conscious striving to excel in this area, and the second is that this attentiveness to patent issues has evolved as a natural consequence of the tough conditions in a highly competitive new market. LB

Illustration: Ebba Strid Udikas

ness Networks and Ericsson Microwave Systems.

Deregulation and privatization of national telecom monopolies offer new opportunities, but also require greater patent awareness.

"Practical examples are required to increase patent awareness in our operations," says Mats Renntoft, responsible for intangible rights at Ericsson Telecom.

"We use systems with which personnel are familiar when we discuss patent matters. Many people are surprised to discover how many patents there are in an area they know well."

### Spread insight

Mats works to spread an understanding that patents are a way to protect the knowledge which is being accumulated and will be acquired.

"The value of the goods we offer the market today is increasingly comprised of knowledge. You have to make this knowledge valuable commercial in order to capitalize on the patent value."

Ericsson Business Networks is also participating in the corporate effort being made in IPR and is complementing the program with its own resources. The strategic importance of patent issues

is being enhanced in the business area.

### Safeguarding patents

"Since we work with new types of applications, for example the mobile office telephone system (DECT), ATM technology and new services, it is important that we work with and safeguard patent issues at an early stage of standardization," relates Lars-Olof Norén, technical manager.

Nevertheless, to date it has been rather quiet in this area for Ericsson Business Networks.

The joint program to recruit and train patent engineers also covers Ericsson Microwave Systems.

"I am an example of the reinforcement that is under way," says Göran Cederholm.

"He returned to the plant in Mölndal last year to share responsibility for patent issue with two other colleagues.

"For us, who previously worked nearly exclusively with defense systems, but are now broadening our operations, it is extra important to be aware of the patent aspect already at the start of a project. There is, of course, a difference between working in a classified defense market and the open commercial market.

### Lars Bäck

Ericsson Business Networks is also participating in the corporate effort being made in IPR and is complementing the program with its own resources. The strategic importance of patent issues



# The choices involve billions



"Purchasing of external technology and business partnerships are increasing rapidly, and Ericsson must therefore manage these activities in a professional manner," says Christer Sparreskog. Photo: Kurt Johansson

**Customers are increasingly demanding open systems based on standards. And they want complete systems delivered quickly. One of the consequence for Ericsson is that the company is not able to develop everything on its own but must instead rely increasingly on technology from external suppliers. It is essential, however, to apply the right business and technical competence in making these choices which can involve billions each year.**

The world of telecommunications is changing rapidly. Ericsson can no longer disregard industry standards, for example by employing an unconventional design.

Production today calls for standards and open systems in which the customer should be able to integrate equipment from Ericsson, Siemens and Alcatel, for example. Time-to-market is also a critical parameter today.

Like other suppliers, Ericsson is adapting to these changes and in many respects radically altering its focus. Because system complexity is increasing, sub-systems and supplementary components are increasingly being purchased externally and integrated in Ericsson products.

## Tomorrow's winners

"In a few years we may well have reached the point where technology purchased externally accounts for more than 50 percent of revenues," says Christer Sparreskog, the manager responsible for issues relating to External Technology Provisioning (ETP) within Ericsson.

"However, this does not mean that we will reduce or abandon our own development work. Ericsson's R & D efforts will un-

## Choosing the right external technology saves billions

doubtedly continue to increase in real terms but decrease procentually," observes Christer.

The assumption is that suppliers no longer have the time to develop everything completely on their own. Therefore it is necessary to choose technology and suppliers, and perhaps to form long-term partnerships, but this is not a simple matter. All companies take risks and there are numerous threats. But those who make the right choices can realize substantial profits. Tomorrow's winners may be those who are the best systems integrators.

## Based on knowledge

Properly managed, external technology provisioning implies concentrating resources to core operations and then refining the value of the company's own products by supplementing them with technology and products from companies that have specialized in other areas. This requi-

res taking advantage of open standards – which reduce development costs – as well as using technology developed in-house.

"But if external technology provisioning is to succeed, it must be carried out in an intelligent manner. ETP should be guided by a strategy incorporated in product development from the start".

"These strategies should be based on a high level of knowledge of the field which can only be acquired through continuous contact with universities, research centers, suppliers, etc".

## Business competence

External Technology Provisioning is a key concept in telecommunications. The number of partnerships announced in the last five years has grown explosively, and business concerns have received increasing emphasis.

Choosing a supplier has become a much more delicate issue

today. Previously, producers mainly bought simple standard components and thus did not risk revealing business secrets. Now, however, the need for long-term partnerships and the complexity of products mean that companies must be prepared to reveal plans that may extend several years into the future.

In order to regulate increasingly complex business relationships, new contract forms are being created. Today, purchasing external technology demands a very high level of business and technical competence that is only possessed by technically trained business men and women working together with specialists of various types.

## Networks

Current plans call for developing a network of ETP specialists within Ericsson. Each unit should have an ETP manager who supports purchasers whose work in-

volves external technology provisioning.

"Because ETP is now increasing rapidly at Ericsson and will affect almost everyone, we must learn to work in a professional manner," says Christer Sparreskog. "This requires coordination and cooperation and that all those involved in a project contribute from the start to creating what can be termed cross-functional teams.

"We believe that in this manner we can create some very powerful forces that in monetary terms can be measured in billions per year," concludes Christer.

**Lars Cederquist**

## Definition:

• *External technology provisioning refers to external supplies of technology that will supplement and be integrated with Ericsson products as well as the procurement of technology needed to develop and produce products.*

## Training package available

**Ericsson has produced a training package that shows how to systematically improve the provisioning and administration of external technology. The package, which consists of documentation and course materials, describes, for example, how to assemble the data needed to evaluate and select technology and suppliers.**

These materials can be viewed as an attempt to create a com-

mon method for ETP throughout Ericsson. They cover the entire supply chain: from analyzing external partners to formulating a strategy, handling purchasing and managing the product through its entire life cycle.

ETP is an issue that concerns virtually every Ericsson employee and affects such areas as product management, technical management, systems management, project management, engineering and purchasing.

The materials should also be

viewed as a guide rather than a rigid policy. The intention is they will provide structure for your work and serve as a reference that can be consulted to ensure that you have not forgotten anything.

The documentation package (product no. EN/LZY 601 159) can be ordered via INFARORDER in Memo (OPNPIC mailbox). The course materials can be ordered from EIN in Karlstad, order no. LZU 104 501.

# Purchasing requires a lot of caution

**"It's important not to take decisions too hastily, because once you have chosen a supplier, it is almost impossible to negotiate better terms," emphasizes Ulf Wretling, business coordination manager at the Ellemtel development subsidiary, where the main challenge is to choose the right direction in the dynamic worldwide software market.**

Ellemtel, in which Ericsson and Telia each have a fifty-percent stake, conducts advanced research and development work on the telecommunication systems of the future. Despite being a development company, Ellemtel increasingly purchases systems and software from external suppliers.

Unlike the hardware market, however, the software market is young and dynamic and includes a number of small players. It is an extremely exacting task to select suppliers and products, since it sometimes can affect many parts of a total system. This is why five years ago of a special business coordination unit was created.

Today the unit consists of seven people, all with special skills in such areas as law, accounting or quality. All have experience of working abroad, and have built up an effective network of contacts.

## Savings of SEK 60 million

The business coordination team has so far negotiated about 30 purchasing agreements, most of which are extremely important strategically and can have a long-term impact on the Group.

Three recently signed contracts, for example, form part of a purchasing program in which it was decided to purchase standardized software that was not included in Ericsson's core operations.

"The cost estimate for internal development of the software was at least SEK 80 million, instead of which we are purcha-



Ellemtel has set up multidisciplinary teams with specialists from several areas. The team shown in the photo includes (from left) Ulf Wretling, head of Business Coordination; Gunilla Modén, company lawyer; Anvar Chivi, technical specialist; Stefan Norrman, project owner; Martin Pålsson, technical coordinator; and Bengt Linnér, business coordinator.

ing the same functionality for SEK 20 million," says business coordinator Bengt Linnér.

"It was a highly complex process for us to handle and took us almost a year," continues Bengt, "but it resulted in a strategically important choice with substantial development potential. The process involved looking at the business plans, alliances, ownership structures, management and finances of the companies concerned."

## Formed team

A team including specialists from a number of areas was formed to evaluate potential suppliers. The members of the team produced market analyses, familiarized themselves with the companies, obtained references and in some cases examined the foundations of companies. The team studied products, costs and licensing requirements. After assembling all the pieces in what seemed like a giant jigsaw puzzle, they were well prepared when they went to meet the potential suppliers.

"We drew up corporate-level agreements giving us the rights to the programs, and maintenance agreements giving us the rights to future products," continues Bengt. "In my judgment, we have obtained excellent suppliers and products on highly competitive terms."

## Help sought

"To begin with, it was we who took the initiative," relates Ulf Wretling, "but now project leaders come to us to ask for help. We serve as a link between engineers, purchasers, lawyers and others involved in the project. Our contribution is to look at non-technical aspects, such as export restrictions, maintenance, costs and intervening patents at an early stage. We also help by establishing contacts that managers and technical staff can pursue subsequently.

"The crucial factor," concludes Ulf, "is that we become involved in a project as early as the feasibility study, before TollGate 0. That's when we can make the most difference." LC

# Better products through partnership

**A partnership should benefit both partners. Through the cooperation between Ericsson and Texas Instruments, TI gains knowledge of the long-term needs of the telecommunications market, while Ericsson obtains access to TI's technical base. This means TI can supply the right microelectronics to Ericsson, as in the case of Ericsson's miniaturization plant in Kista, which uses process technology from TI.**

"Partnership is all about building up a long-term relationship," says program manager Lars Ekman, who coordinates Ericsson's cooperation with Texas Instruments. "A partnership can produce benefits for both parties that would be hard for either party to achieve alone.

"A partnership requires openness and trust," continues Lars. "Both parties need to feel that they can safely reveal future plans."

The cooperation between Ericsson and Texas Instruments began in 1987, since when it has grown strongly and now requires an increasing amount of coordination.



Mobile telephony from Ericsson and microelectronics from Texas Instruments make a powerful combination in the partnership coordinated by Lars Ekman from Ericsson and Jean-Pierre Demange from TI.

"One of the problems we had arose from decentralization within Ericsson," explains Lars. "We have sometimes had difficulty presenting a united front to our partner. But I believe that will become less of a problem now that we have our new corporate purchasing function, headed by Jan Tufvesson."

In order to provide a more clearly defined structure, Ericsson has formed two teams, with representatives from the business areas, to coordinate the handling of questions at corporate level. One of the teams handles Time-to-Customer questions, while the other handles methodologies and tools for ASIC development.

## Harnessing efforts

Ericsson and TI are two companies of comparable size that must harness their efforts to achieve common goals. This type of cooperation takes a long time to establish, requiring great patience and a willingness to proceed in small steps.

It is an encounter between two companies with different cultures. Most of the problems that occur fall into the "soft" category, arising from the relationships between people. But problems may also arise from more substantial issues, such as Ericsson's preference – not shared by TI – for extremely long-term planning. LC

TELECOM

CLIPPINGS

KJELL ERIKSSON

## Upward trend for telecoms

■ AT&T's sales rose by 8 percent during 1994, to USD 75.1 billion. Earnings of USD 4.7 billion represented a 73-percent increase. The excellent results are attributed to the company's successes in international telecom services, an area where the company is battling rivals MCI and Sprint.

■ Alcatel is struggling to get back on track after a series of setbacks ranging from losses suffered by its German subsidiary to corruption hearings involving senior managers with the company. The German losses, amounting to DEM 300 million, were one of the factors behind a reduction of the earnings forecast for 1994 to FFR 4 billion, compared with earnings of FFR 7 billion achieved in 1993. A crisis group is now being formed that will liaise closely with the president's office and speed up decision-making at corporate level. There will also be management changes, with greater opportunities being given to younger employees with the right qualities.

■ A strong fourth-quarter recovery was reported by Northern Telecom, which is now in an expansion phase. The company has implemented an extensive restructuring program during the past 18 months. Earnings for 1994 were USD 408 million, following a loss in the preceding year. Sales increased from USD 8.15 billion to USD 8.87 billion.

■ Northern Telecom and Mercedes Benz have signed a declaration of intent to jointly exploit the potential of the German market. NT will have a 50-percent ownership share of the new joint venture company.

■ Motorola increased its sales from USD 17 billion in 1993 to USD 22.2 billion in 1994. Earnings rose at the same time from USD 1.02 billion to USD 1.56 billion. Order bookings in the mobile telephony segment – for both mobile telephones and mobile telephony systems – increased strongly during the fourth quarter.

■ The German steel manufacturer Thyssen has joined forces with Bell South in a bid to seize a share of the German telecom market. Thyssen will own 60 percent of the new company, which will focus on communications services rather than hardware or infrastructure.

■ Cable & Wireless and Veba plan to create two joint venture companies, one of them based on Vebacom and focusing on the German market, while the other, to be known as Cable & Wireless Europe, will form alliances with local partners in various European countries.

■ Italy's anti-trust authorities have ordered Telecom Italia to make lines available to Telsystem, a provider of telecom services. The authorities reproved Telecom Italia for abusing its monopoly and contravening EU regulations by refusing Telsystem access to the lines.

■ Singapore Telecom is joining forces with Telekom Malaysia, PT Indosat and PDLT to coordinate regional telecom services to multinational companies based in Southeast Asia.

# Focus on the P500

## — the new “pro” radio

**The P500, Ericsson's new portable radio for MRS 3000 and 5000 mobile radio systems, was the main attraction in early December, when it was unveiled to some 30 dealers in Sweden. Small, lightweight, durable and long-awaited was the overall judgment on the new radio, which now is broadening the market for Mobile Radio Systems, MRS, sales.**

“Rumors of the demise of the MRS systems are considerably exaggerated. The systems are alive and vigorously healthy, and are the object of very strong order bookings in Sweden.” This was the introductory statement by Bo Andersson at the dealers meeting held in Gothenburg December 1.

“Bosse” is responsible for the land-mobile segment at Ericsson Mobile Communications' S Division. It was at the dealer meetings in Gothenburg, Eskilstuna and Umeå that the new portable P500 radio was introduced. Its premiere was held in Gothenburg, where Lennart Pettersson, salesman at Ericsson Mobile Communications in Gothenburg, was host.

### Lightweight

“There has long been a need for a small, lightweight and user-friendly, portable radio, and it is through our cooperation with the Danish company, Niros, that we are now able to introduce a highly competitive product,” said Bosse. “The P500 is entirely a newly developed radio which, eventually, will be available in different versions.”

MRS 5000 is a highly profitable radio system which, from a publicity standpoint, is somewhat overshadowed by EDACS. The systems do not compete since their appeal is to different customer groups. Traditionally, municipalities and rescue services are the major customers for MRS 5000. The new portable P500 radio broadens this customer group to include security companies and industrial companies. Although a certain breakthrough has been made in the latter category, the outlook is now brighter with this new radio.

### Pocket sized instructions

Bengt Fogelberg from Ericsson Mobile Communications, Kista, handled the technical presentation and began by reviewing the operating instructions. This has been produced in small format,



Hurrah for the P500 shout, from left, Ole Hartvig Bjerknes Jacobsen, Norway, Magnus Magnusson, Växjö, Christer Axelsson, Borås, Olle Fellert, Malmö, Sten Gillberg, Jönköping and Håkan Tykö, Helsingborg.



Christer Axelsson, Tore Pihl and Sten Gillberg consider the P500 to be an attractive product.

suitable for fitting in a standard shirt pocket (does such a thing exist? reporter's comment).

Bengt meant that the operating instructions apply more to the system since the radio, due to its menu control, is so easy to use that instructions are scarcely required. He also introduced the

accessories to the P500 prior to a lecture on how to code the radio.

### Selling tips

Ulf Ryde from Mercury International provided the meeting participants with a short but intensive lecture on “How do we sell?” He subdivided the sales

work into three steps: first, to create, or awaken, a need on the part of the customer, then, to influence this perceived need and, finally, to convince the customer that the P500 is the solution to his/her need. Ulf emphasized the importance of identifying key customers. The most important

aspect of selling is finding and then visiting the customer. With products such as the P500, the important thing is not price but the customer's need.

### Long-awaited product

The new radio was very warmly received by the dealers present.

“A quality product that will be fun to demonstrate for customers,” was the opinion of Tore Pihl from Halmstad.

Magnus Magnusson, Växjö, considered that new radio products had stagnated and that having a new radio to introduce was a fortunate development. He particularly appreciated the well-prepared and comprehensive introduction package.

“The mobile telephone has not taken over entirely and this is a welcome development for us “radio people,” we who believe in radio, to have this new product to sell. This is certain to result in good sales and earnings,” he said.

### Satisfied

Håkan Wolff, head of the rescue service in the city of Falun, Sweden, tried out the P500 during a two-month period last autumn. He is very much satisfied.

“This is a new generation. The radio is lightweight, user-friendly and the batteries are long-lasting. It appears to be robust and being software-controlled is a definite plus,” he says.

For the P500, this should be more than enough for a passing grade.

Gunilla Tham

# Card economy saves millions

**Ericsson's factory at Ingesta in Norrköping, Sweden, has conducted a project aimed at reducing production costs for one of Ericsson's high-volume products, a line card called LIB in the AXE switch.**

**The card, millions of which are manufactured each year, has now been checked with a fine-toothed comb to ensure it is competitive on the world market. Mass production begins in the spring.**

"This project is unique in that the production and design units have collaborated closely on it," says Staffan Wohrne, at Ericsson Telecom's headquarters in Stockholm. Staffan is the product manager and the person actually responsible for this product.

"Close cooperation between the designer in charge and the production and administration units has significantly cut costs," he claims. "Tough competition in the international market is what is compelling us to keep costs down. That's why it's important for everyone in the manufacturing chain to take responsibility for his or her part."

## Streamlined card

The designer responsible for the LIB card is Sören Eriksson. He has put tremendous effort into "trimming" the card. For one thing, he has replaced some older components with new, smaller ones that are cheaper and take up less space. He says, "The idea in the long run is to be able to double the number of connected subscribers in the next-generation version."

The project manager, Göran Gunnarsson, explains, "What you have to do is look at how customers are using a card, so you don't supply anything that isn't necessary. For example, we noticed that most customers don't use certain functions. So we just removed some of the components and adapted the card to our modern production equipment. Customers who need the function we removed get the previous version of the LIB card."

## Production ruled

One of the innovative aspects of this project is that the project manager comes from a production unit in Norrköping. Hence, the project has benefitted from

## New, simpler line card launched for the AXE switch

his extensive experience in manufacturing.

In addition to coordinating the work, the project manager's tasks include trying to adapt the manufacturing process to modern production. One goal has been for other Ericsson factories around the world to use the same method.

The LIB card occupies a large part of an AXE station and contains electronics for telephone services. The LIB card is what sends the connection tone you hear when you pick up a receiver. Then the card receives the "numbers" dialed on the telephone's dial or keyboard. The card also transmits ringing signals and converts the subscriber's voice into digital signals that are transferred to the phone he or she is calling via a line card in the destination switch.

"Millions of LIB cards are delivered each year and every penny we can save in manufacturing costs adds up to millions of dollars," according to Klas Arilsson at the Norrköping factory.

## Million-seller

Klas Arilsson also reports that the project has proceeded according to plan and that they have delivered a number of prototypes that have been tested.



**Staffan Wohrne (left) at the main plant in Stockholm, is project manager and bears the primary responsibility for this work. At his side is Sören Eriksson, designer in charge of the LIB card. Photo: Peter Nordahl**

The results of a preliminary production run have been tested in a public telephone station.

## Close cooperation

A key figure in production has been Tomas Lithner. He says that it took barely a year to carry out the plan.

Now, machines stand ready, and mass production will begin in one month. The first cards will be delivered to China, which is Ericsson's largest market for the

AXE.

Work has advanced through close cooperation between staff in the design department in Stockholm and in the production unit in Norrköping. The multi-functional project group formed enabled direct and close communication. And a fringe benefit of the project is that the understanding and good relations among all those concerned continued after the goal was reached.

"That makes future projects



**Tomas Lithner, production technician at the Ingesta factory in Norrköping.**

## Remaining issues of Contact this year:

**Contact is issues 10 times per year. This year, the eight remaining issues will be distributed on the following dates:**

- No. 3** april 4
- 4** may 5
- 5** june 1
- 6** aug 18
- 7** sept 14
- 8** oct 12
- 9** nov 9
- 10** dec 7

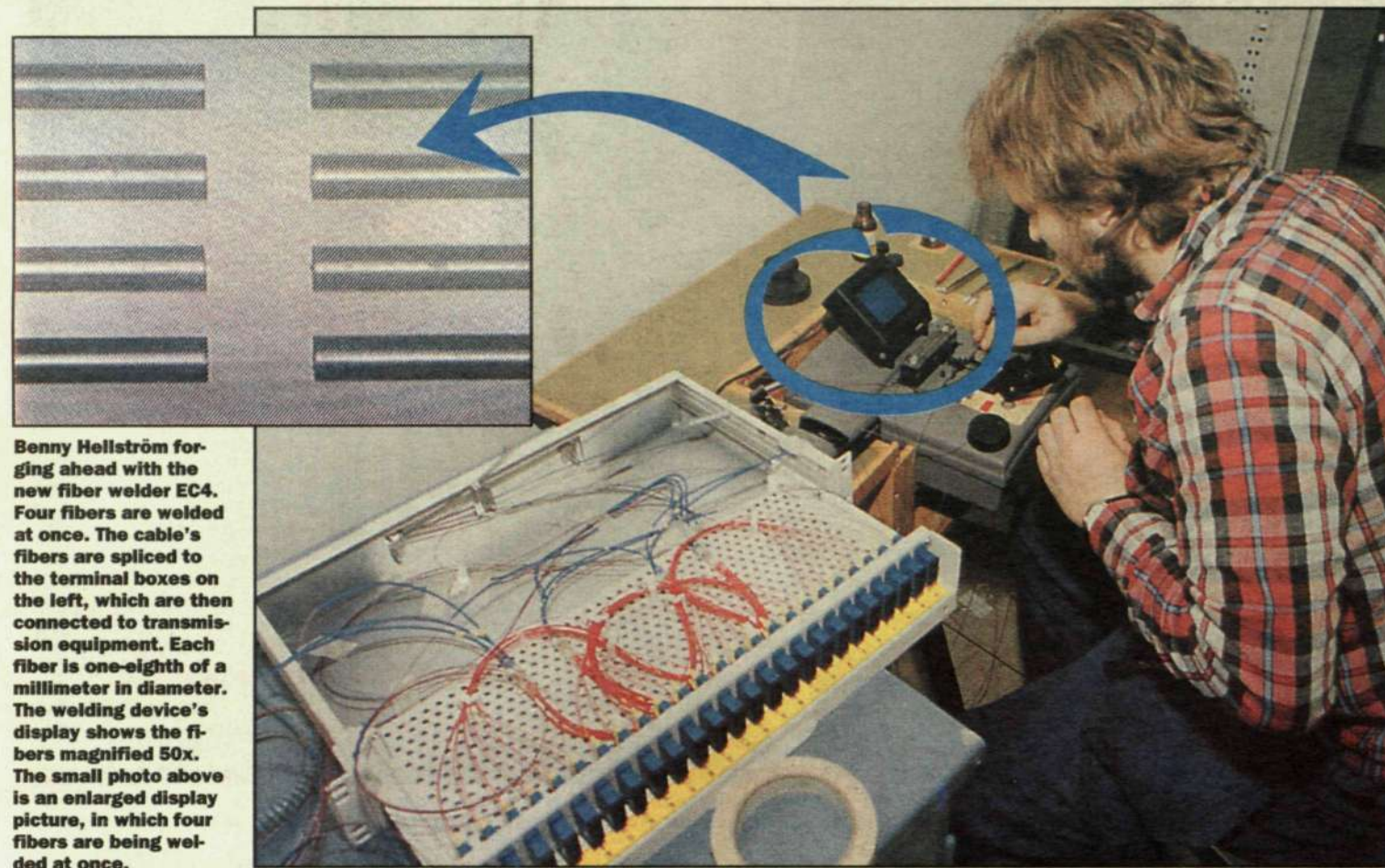
Note that the listed dates are distribution dates. These dates the magazines are delivered to the Swedish Post Office for distribution. We are distributing Contact as priority mail. This means that it should have reached the readers within one week from the dates mentioned. However, there could be some delays in the local distribution at your Ericsson unit.

If you receive your copy much later one week from these dates, please let us know. We are constantly working on improvements in our distribution. Your feedback will aid us in this.

The Network Construction Division of Ericsson Business Networks keeps a lot of irons in the fire. One of those is providing other branches of the Ericsson tree with the most modern communication options conceivable. A 4 x 96 fiber-ribbon link now ensures data traffic between Ericsson Data in Älvsjö and the Tellus plant at Telefonplan in southwest Stockholm. Construction work proceeded quickly and efficiently, mainly thanks to a new, revolutionary blow-in technique. Recently, the first link was put into service.

# BLOW-IN

...or the noble art of laying cable



Benny Hellström forging ahead with the new fiber welder EC4. Four fibers are welded at once. The cable's fibers are spliced to the terminal boxes on the left, which are then connected to transmission equipment. Each fiber is one-eighth of a millimeter in diameter. The welding device's display shows the fibers magnified 50x. The small photo above is an enlarged display picture, in which four fibers are being welded at once.

The name Sales Stockholm in the Network Construction Division's Swedish unit is a cover for 10 or so employees, most of them planning engineers or sales personnel, who have honed the production of tailor-made network solutions to an art. These people focus on Swedish network owners and their needs for internal corporate networks for telephone and data communications and the connections between them. With its own staff and assembly and installation personnel from the production unit in Järfälla, Sales Stockholm assumes responsibility for the practical work that enables users to get the most from the technical features that Ericsson Business Networks offers, for example in the form of business exchanges and data networks.

"Our main task is to provide Swedish owners of networks with various types of communication solutions for voice and data, such as installing company networks, laying cables and set-

ting up radio-linked networks. Each individual project is usually fairly small. But this order is worth SEK 6 million and was a major project for us," says Emil Henriksson, planning engineer for Sales Stockholm.

As usual, Ericsson Data asked for bids from several suppliers, and fortunately the bid from Ericsson Business Networks was the most competitive.

**Great digs**  
Under the leadership of Emil Henriksson and Hans Holmberg, the project group has dug its way along well-excavated roads in the Älvsjö area.

The construction work has burrowed through roads and sidewalks, past shops and houses, and through gardens of suburban homes. On the whole, the public has been patient, despite one or two lawns being dug up.

**Lots of measurements**  
Laying a cable sounds like a pretty easy thing to do. The lay-

ing work itself, though, comes fairly late in construction. The first step is to lay a pipe for the cable to run through.

In this project, five pipes were laid, two for parallel cables and three reserved for future needs. Running cables in tandem ensures higher reliability for data traffic. One cable serves as a back-up and lies ready to be put into service if the primary should fail.

During construction, the underground position of the cable is carefully recorded, to prevent it being accidentally dug up or damaged in the future.

"Telia (Sweden's former PTT) and the municipalities have stringent requirements for being able to pinpoint the exact position of a cable. You can't be more than 10 centimeters off," Hans Holmberg explains.

"You measure the distance from the beginning to end and record the lie of the cable with a coordinate system. The depth of the ditch is also measured while

its open. Stockholm Entreprenad has been out and measured more than 30 times and taken care of the mapping. That documentation is kept up-to-date by Stockholm Waterworks, which refers to it when approving future excavation work in the area, for instance for cable-TV."

The careful measurements make it relatively easy to fix any damage that may occur. If they know a cable has failed, they can locate the fault on a map within a few centimeters, so they know where to dig and fix the cable.

**New methods**  
The new techniques for laying the pipe and inserting the cable was a success. In collaboration with the development company Ullvator, in Åmål; Sweden, a prototype was tested in which the pipe sections were linked so that more pipes could simultaneously be laid side by side.

"Usually, you lay pipes one line at a time," Kent Andrén, purchaser for the group, explains.



Hans Bjerneby with the new pressurized air machine from Lancier. Using 10 tons of pressure, he blows a 96-fiber cable into a pipe somewhere among the homes of Älvsjö.

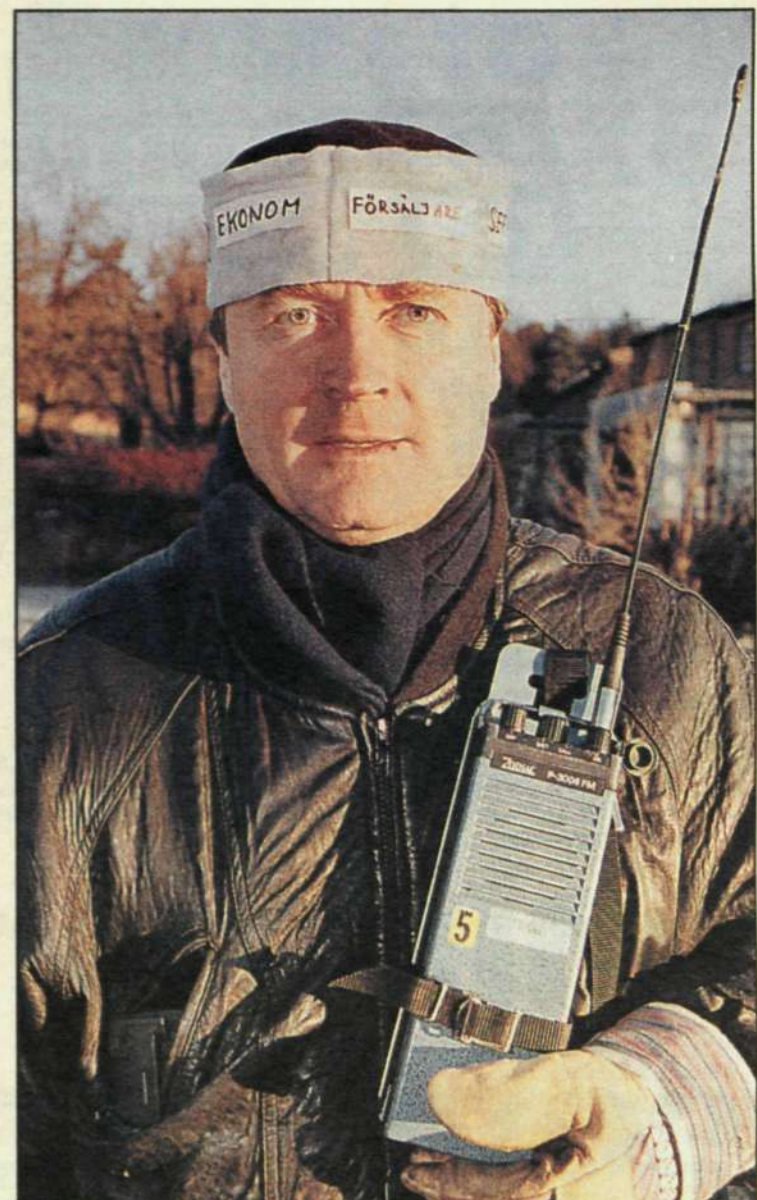
"So five lines take quite a few passes for the same stretch of ditch. This method is much more efficient."

Fast action was particularly important in this project, because

it started so late in the year. Ericsson Data submitted an order at the end of June, and after intensive preparation, construction work began in October. Late autumn and winter are not the ideal

seasons to lay cable. Luckily, the weather gods were merciful, because the ground had not frozen, something which would have delayed the project at least until early spring.

The pipe is not your everyday pipe, either. The interior surface of the pipe, where the cable is housed, has minimal friction, enabling the new blow-in technique. Instead of pushing the cable



Project manager and jack-of-all-trades Emil Henriksson with his famous hat that describes some of his roles. He wears his hat with his current task facing forward.

**Cable that can carry 11,000,000 calls at once**  
The fiber-ribbon cable used in the project is a relatively new type produced by Ericsson Cables in Hudiksvall. The cable is only 16mm thick but contains 96 optical fibers! Two cables for operations and two back-ups ensure ample capacity, essential for the heavy traffic it is intended for.

Ericsson is a computing-intensive company with a giant archive systems. Computers are also used in the manufacture of equipment, such as the AXE systems. Ericsson's computer room in Älvsjö is Sweden's largest, and the one at Tellus will not be much smaller.

"If you were to use these 4 x 96 cables for telephone traffic, they could handle 11 million calls simultaneously," Emil Henriksson says. "The entire population of Sweden could easily call at the same time. That's one way of grasping what a mighty link we're talking about."

into the buried pipe, the cable is blown into the pipe with pressurized air. Lancier, of Switzerland, developed the method in cooperation with MABO, of Norway, which also produced and supplied the pipe.

**Save time and men**  
It took three and a half days to blow the cables into the pipes. Emil Henriksson joined in the task.

"For a distance like this, 2.5 kilometers, we normally would have had to dig 10 or so holes to feed the cable past bends and curves. This time we only had to dig at two places, where the pressurized air couldn't cope. We were able to blow the cable as much as 900 meters before it stopped. This method saves time and especially manpower."

Human resources were stretched to the limit when the final phases of work on Ericsson Business Network's new headquarters in Nacka Strand created something of a shortage of per-

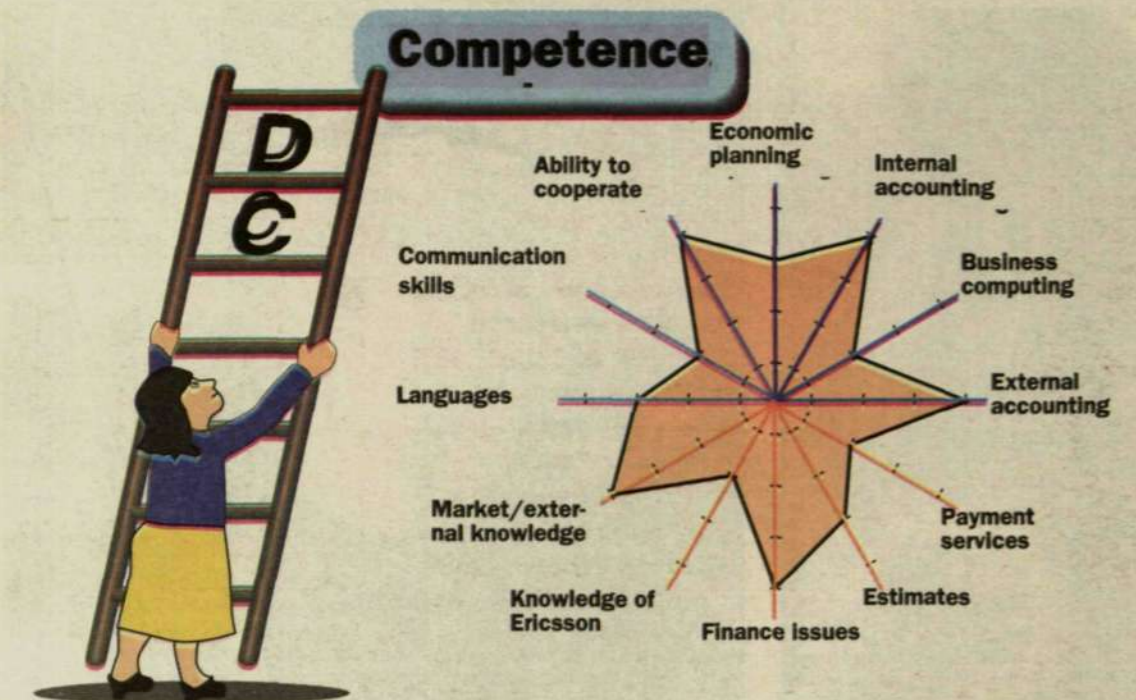
sonnel during a few hectic weeks around New Year's. As luck would have it, Sales Stockholm's workers deserve to be called "jacks-of-all-trades."

Emil Henriksson is used to having to pitch in wherever help is needed and even has a specially designed hat with his various titles around the rim. All he has to do is turn the hat so the job he's doing at the time is up front!

**Quick welding**  
Once construction had passed the gates at Ericsson, all that remained was some cable work and installing and connecting. Welding proceeded quickly and smoothly thanks to Ericsson's revolutionary EC4 equipment, in which four fibers can be welded at once.

The project is just about finished now, the test-run went well, and during February the first cable was put into service by Ericsson Data - exactly as promised.

**Karl Malmström**  
Photos: Thord Andersson



The competence of a job category can be described as a scale with four levels (or a ladder with four rungs). The competence levels of a System Engineer are A=Basic, B=Senior, C=Master or D=Principal level. The competence levels for job categories within "Functions" are expressed in a competence diagram. Above right are the competence areas within Ericsson Telecom Finance. This illustrates if a person has a more specialized or broad profile.

# Improving competence step by step

International competition and the rapid pace of technology means that developing competence is essential for a company like Ericsson. Planning which types of competence will be needed in the future is a way for the company to retain its position in the world market and for employees to feel secure in their jobs.

## The model that helps you develop your skills

ting competence levels and judging which types of competence are needed in the future.

"Competence is the largest human resource issue today," says Lars Wiklund. "But it's not entirely up to the personnel department. The model should be flexible according to different needs."

"Development of the employees' competence is a question of survival. Since our ambition is to limit the number of managers, it is also important that the other job titles become more distinct."

Through MKY, the employee can find out exactly what the competence requirements are within his or her job category and the possibility of developing the competence needed by the company. Thereby, the employee's job security is based upon his or her competence, rather than current job responsibilities and organization.

### What is competence?

So what then is competence? Ericsson Telecom defines it as the ability and desire to gather, use and spread knowledge.

Competence has been achieved when a job is completed effectively and correctly. "We have divided competence into three main components," explains Elisabeth Fellbom, responsible for MKY within Ericsson Telecom.

The three components are job skills, diversity and social skills. Both width and depth are needed in varying amounts within different jobs.

Job skills consist of factual knowledge, quality and efficiency - all proficiencies required within any field. Diversity is experience not required in daily work, but which is nonetheless an asset giving flexibility and perspective.

For example, knowledge of Ericsson, language skills and formal education all contribute to diversity. Social skills include the ability to cooperate, communicative skills and the ability to accept change.

### Assessing levels

Within every main process and function, the main process owner and the function coordinator should define current and future competence requirements for each job category descriptions. Definitions should be made in close cooperation with the line organization so that descriptions are relevant and include necessary improvements. Competence descriptions should be revised annually.



Development of the employees' competence is a question of survival. Through MKY, the employee can find out exactly what the competence requirements are within his or her job category and the possibility of



Jan Kemvall, manager of Asian and Middle-Eastern Market Operations.

the points of the star (see figure above).

In practice, MKY will be used so that each employee will be informed of his or her job category description. Both the employee and the manager decide independently which levels are relevant for each area of competence and then the results are discussed together.

"We have found that, for the most part, the manager and the employee agree," says Elisabeth Fellbom.

### 100 percent objective

"However, it's not our goal that the assessments be 100 percent objective," adds Lars Wiklund. "That's not possible. If MKY leads to increased understanding between management and employees, the effect will be positive. Competence assessment is a good basis for personnel review discussions."

MKY will be used primarily in situations where there are large groups of employees with similar job duties and/or with knowledge and skills that are very specific when it comes to Ericsson. Of course, many employees are not included in this framework of job descriptions, but they should also have the possibility of developing their competence.

### Not a pay scale

An objection to the MKY system is that the model has no bearing on determination of salary levels.

developing the competence needed by the company. Thereby, the employee's job security is based upon his or her competence, rather than current job responsibilities and organization, according to Lars Wiklund and Elisabeth Fellbom.

"MKY should not become a new title nomenclature," Lars Wiklund explains. "Competence should of course be rewarded, however, MKY should not be a rating system where a salary increase can only follow a competence level increase."

"If we use MKY in conjunction with salary levels, we would risk losing the focus on competence development and will have missed the point with the model. Yet another reason is that those employees not in the MKY system would become worried about the status of their own salary increases," according to Elisabeth Fellbom.

### A common language

Jan Kemvall, manager of Asian and Middle-Eastern Market Operations, has experience with MKY, both in his current position and when he was previously responsible for a business unit.

Jan says, "MKY has furnished us with a language for defining and handling competence. We now have the means to express what type of competence we have today and what we need tomorrow."

Jan Kemvall believes that MKY forces management to find out what type of competence is needed in various processes, which is good. MKY has also led to greater clarity between management and employees. Management is required to really think through its own area's competence needs, since every-



Jarl Höglund uses MKY within the Product Management main process.

thing is documented in black and white. The individual receives better competence guidelines, which makes movement in that direction more attractive.

### Real job security

"I think it's especially important to have aids such as this in a company as technically- and scientifically-oriented as Ericsson," he adds. "We aren't used to measuring such vast concepts as competence, but MKY gives us the language and the terminology to make it possible."

### The following are job category descriptions:

- **Marketing & Sales:** Business Analysis, Business Management, Consumer Project Management, Contract Engineering and Network Engineering.
- **Product Provisioning:** System Engineer, SW Designer, HW Designer, Tester and Technical Writer.
- **Customer Support:** Support Engineer, and OM Consultant.
- **Functions:** Communications, Human Resources, Finance Ericsson Telecom (considered a function for MKY), Quality and Operational Development.
- **Other:** Training and Project Manager.

# Easier to update AXE

Ericsson Telecom Sweden has introduced a new method of updating AXE switchess. Over 250 of Telia's AXE stations have been updated this fall using "Upgrade Package 10." The project was on a very tight schedule, but was nevertheless completed by the November 10 deadline.



Jan Pehrson from the After-Sales department at Ericsson Telecom Sweden.

There is a unit for system updates in the After Sales department at Ericsson Telecom Sweden. The unit specializes in upgrading so-called application systems for Telia. Jan Pehrson is responsible for this function, which he says used to be carried out by each of the Telia regional units themselves. The ninth upgrade package, which was installed during 1993-94, was managed centrally by Telia, which today is a part of Ericsson Telecom Sweden.

"The reason Telia didn't upgrade this time around was that we can do the job faster and with greater accuracy. Furthermore, we can employ a method that creates fewer disturbances for the subscriber," according to Jan Pehrson.

### Quick installation

About 30 Ericsson employees have worked on Upgrade Package 10. More than 250 stations have been upgraded during a ten-week period. This is a very short installment time and the same process has been used on all the stations.

What is interesting about the process in the upgrade package is that the system's data is updated in a system test site, plus that the results can be transported to Ericsson in Nynäshamn safely and accurately. Experts in operative systems at Ericsson Telecom Sweden participated during the installment period. They supported Ericsson's personnel and participated in information sessions with Telia's different regions.

### No. 11 under way

The next major update at Telia is Upgrade Package 11, which will probably be installed during the third quarter of 1995. It is yet uncertain if Telia will do the job themselves this time, or if Ericsson will receive the project. Jan Pehrson maintains that Telia's headquarters decides who will supply the AXE upgrade packages.

### New business unit

This past year, Ericsson Telecom established a new business unit called Customer Service. It will, among other things, handle questions surrounding upgrading. Jan Pehrson says that representatives from Customer Services have been to Nynäshamn to receive information about the operations there.

"Hopefully, we will be able to give some insight on Upgrade Package 10 that they can convey to other units within Ericsson Telecom," says Pehrson.

Text and photo: Bert Björkling

Lena Granström



# Ericsson in the starting blocks in Fukuoka

**Ericsson Toshiba's office in Fukuoka is just a stone's throw from the customer, Digital Tu-ka Kyushu.**

**Work is in full swing preparing for the installation of the mobile telephone network to be installed this spring.**

"We have promised the customer to hand over the system in March 1996 and we intend to keep it," says Henrik Puustinen, manager of Ericsson Toshiba's regional office in Fukuoka.

At the end of September 1994, the operator Digital Tu-Ka Kyushu ordered a mobile telephone system valued at SEK 630 million. Digital Tu-Ka is a new operator company owned mainly by Nissan Motor Corporation in cooperation with Japan Telecom. Digital Tu-Ka Kyushu is the group's first regional telecom operator.

## Competition

"We are proud to have received the assignment to deliver the mobile telephone equipment and we won the order in competition with NEC," Henrik relates.

The customer carried out the cell planning and Ericsson Toshiba will deliver mobile switches, radio base stations and operating support systems. Installation begins in April and the heaviest period will be in the summer. The cut-over is scheduled for year-end 1995, which

## First digital mobile system in rural Japan

means that the customer should be able to call within the system.

### Room to grow

Ericsson Toshiba's offices are located in a new building with a view of the Fukuoka harbor. The customer's office is a stroll away.

"Rents have fallen here in Japan and we were able to rent these newly built offices at a reasonable rate," says Henrik. "We have room to grow in also."

Currently, there are 12 employees and most are locally recruited Japanese.

### From China

Henrik began working for Ericsson in 1989 in China and is well-versed in how to do business in northern and southern China. There is a great difference. He moved to Japan in autumn 1993, where negotiations had begun in September.

"You cannot compare China and Japan. The cultures are totally different. When you complete negotiations in China, you start work immediately, but here in Japan you prepare detailed schedules together with the customer and these are important to follow.

"Even if the way of doing business is different, I often benefit a lot from the experience I gained

during the years in China," Henrik adds.

"Here in southern Japan, the people are easier to get to know and are more relaxed than on the rest of the country."

### Rural area

The distance to Ericsson Toshiba's head office in Shin-Yokohama may appear great on the map, over 600 miles, but by air or the Shinkansen high-speed train, the trip is fast. Without exaggerating, sometimes it is easier to travel from Tokyo to Fukuoka, than from Tokyo to Yokohama since the traffic is too heavy in the region.

The operator Digital Tu-Ka Kyushu sees Kyushu as a rural area, although by European or American population standards it would hardly be classified as such. All the systems to other mobile telephone customers in Japan, TDP, KDP and CDP, are located in metropolitan areas. The system Ericsson Toshiba is delivering in Fukuoka is being supplied to a new operator and in a new area of Japan. Accordingly, the contract will be an important reference in the rural market in Japan. The mobile telephone gang in Fukuoka are going to have a tough and exciting time in the future.

**Gunilla Tamm**



Henrik Puustinen and his secretary Chiyuki Yamano.

## Facts about Fukuoka

Fukuoka is located on the island of Kyushu in southwestern Japan. On Kyushu, which is the third largest of Japan's islands, there is industry and agriculture. The island is like a miniature Japan. In eastern Kyushu there are warm springs which are a popular tourist site. Fukuoka, which has a population of about 1.3 million, is one of Japan's most important export harbors. There are many fine beaches outside the city.

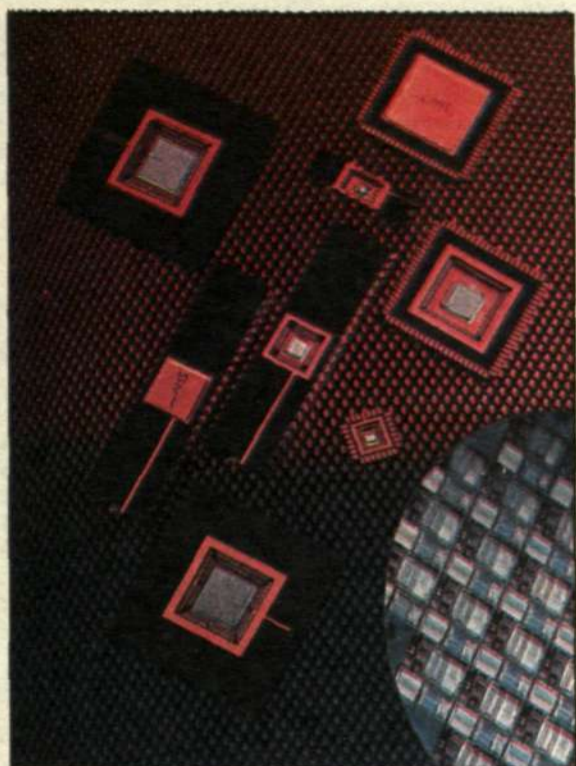
There are western homes in Fukuoka, although they are not too common. Rents are lower than in Tokyo.

There is an American school and many foreign students. By air, it is close to the rest of Asia and there are direct flights, for example, to Thailand.



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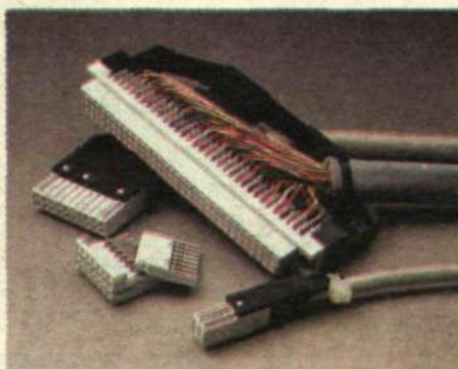
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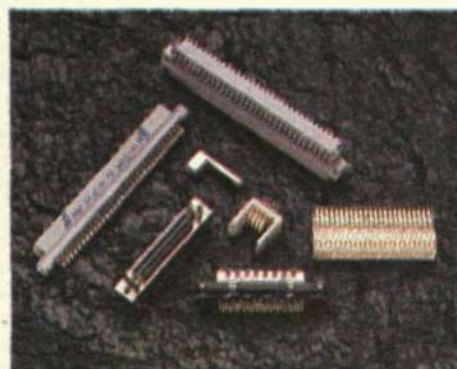
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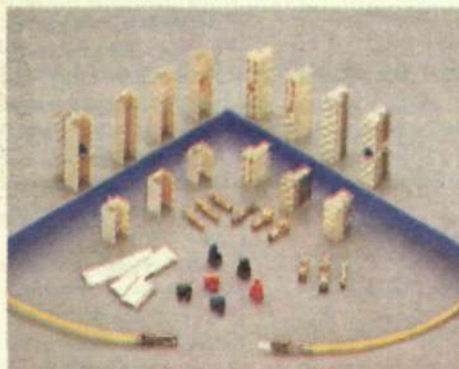
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# VACANCIES AT ERICSSON

This is a selection of vacancies within the Ericsson corporation. They are published in the electronic News system, which is being updated once a week. For further information about advertising here, contact Birgitta Michels at Ericsson Events, HF/LME/A. Phone +46 871928 14.

## DATA

Ericsson Hewlett-Packard Telecommunications AB, Västberga

### PRODUCT SPECIALIST - DATA COMMUNICATIONS EXPERT

Datacommunication is a vital part of the TMOS and is based upon standardized protocols as TMN Q3, TCP/IP etc. You will be responsible for managing the technical knowledge in datacommunications within the LBB Team thus getting in-depth knowledge of the datacommunication products from our Third-Party suppliers, participate with this knowledge in revisioning the Standard LBB release, provide expert technical knowledge and understanding of technologies to EHPT and the Ericsson organization, provide support of these products to EHPT and the Ericsson organization, manage Trouble Report handling, investigate new Third-Party products etc.

You have a Bachelor or a Master Degree in Computer Science or equivalent, technical knowledge/experience in OSI, Telecommunications Network Management, TCP/IP, X.25, programming in C, routers, gateways, LAN/WAN dimensioning analysis/test, good communication and technical translational skills and ability to cooperate in a cross functional environment.

### PROCESS MANAGER

You will be responsible for management of the LBB Processes (sourcing in Third-Party Products, etc) in the LBB Team thus defining, optimizing and maintaining these LBB Processes and their relationship with the other processes in the EHPT organization, making sure the LBB team follows these processes and provides the necessary documents and approval as requested by the EHPT organization and ensure that the team follows the high quality standard.

You should have a Bachelor or a Master Degree in Computer Science or equivalent, you might be a new graduate, knowledge/experience in Process- and Resource Management and in product administration and ability to communicate and cooperate in a cross functional environment. You are fluent in English and confident in a fast changing environment. You like to work in a multilingual/multicultural and fast changing environment.

Contact: Sten Skipper Rasmussen, 08-7194783, Memo EHSSKIP. Appl. to VK/EHS/FP Agdahl or MÖ/EHS/FP Ljungqvist.

## ADMINISTRATION

Ericsson Telecom AB, Business Development and Marketing, HF

### PROJECT ASSISTANT

A new and exiting project in the Cable-TV area provides an opening for a professional project assistant. You are going to assist the team with lots of tasks including computerized project administration and bookkeeping, creating and maintaining large databases (both technical and administrative), writing both business and other professional letters, ordering different reports and standards and ordering hard/software components and systems. You will be using modern computer tools, databases, document processing/scanning, Internet access etc.

You have to be familiar with computers, have a strong interest for work with different computer tools and also be willing to learn new things in this area. You must be able to professionally communicate in English and it is an advantage if English is your native language. You are a computer and technical interested person with administrative skills who wants to try new things. The position requires initiative, flexibility, independence and a mind for service and problem-solving.

Contact: Jan Bogdanski, 08-7190258, 08-7521386, Memo ETXJBOG, Bo Nykvist, 08-7192949, ETXKVIS, or Kerstin Halén, personnel, 08-7192054, ETXKER.

## PURCHASING

Ericsson Business Networks AB, Business Comm. Div., Nacka Strand

### OEM Senior Purchaser

You will participate in multifunctional and other projects as purchasing/sourcing representative and specify negotiation request together with PM/Project. You will also be responsible for financial evaluation of current and future suppliers and take care of the negotiation process for OEM. You are also responsible for implementation of contracts within and cooperation with RLC/LCC to improve and maintain relationship with suppliers.

Bachelor or masters degree in business administration, finance or engineering. Qualified candidates are very market oriented with 3-5 years documented experience in purchaser position. Excellent communication skills, fluent in English and one Scandinavian language verbally as well as in writing are other important characteristics.

Contact: Peter Hult, 08-4220067 or Erik Edhag, personnel, 08-4220288.

Ericsson Telecom AB, BU Transport Network Systems, Kungens Kurva

### SECTION MANAGER

You will lead the section responsible for customer offers and Sales Support, which is included in the Market Project Office (MPO) within the TNS market sector. The size of your unit will be 10-15 persons mainly providing production of offers in conjunction with Customer Request For Quotation and technical assistance and Sales Support to Ericsson-sales channels in the world at MLCs and LC/MOs. Your section will operate towards international customers.

You are expected to be senior and in possession of a background built up of some years experience in general Telecommunication area combined with a managerial skill. You are used to or may be in contact with customers today, therefore we assume that you know how to maintain a dialogue with them. You are service minded and communicative. We expect a yearly business growth of 30-40% for the years to come. This requires a lot of good planning and proactive work and puts in focus your role as the manager of the unit. Being a Section Manager at TNS opens a career growth path in an evolving area full of challenge and opportunities!

Contact: Taieb Djerbi, 08-7195441, Memo ETXT.ETXTADJ or Catarina Larson, personnel, 08-7190836, ETXT.ETXL-CAT.

Ericsson Telecom AB, Market Operations Africa & Latin America, KK

### PRODUCT MARKETING - SWITCHING & SDH

Product Marketing at G-region is a job that requires good technical ground, business orientation and customer understanding. It means proactive marketing through seminars, workshops, field studies, business cases etc. etc.. It means identifying and understanding our customers needs and to give him our solutions. It means working towards 2 exciting continents with direct contacts with local companies and customers.

Contact: Hans Karlsson, 08-7199517, Memo ETX.ETXHLK.

## MARKETING

Ericsson Mobile Communications AB, Kista

### BUSINESS DEVELOPMENT & SUPPORT, APPLICATIONS - MOBIL DATA

Mobile data is becoming a very exciting area and the growth rate is strong. We have now sold and installed Mobitex wireless packet data networks in a number of countries in the world. Mobidem is the trademark for our radio modems based on the Mobitex standard. The radio modem is part of an application consisting of both H/W and application and connectivity S/W.

Mobitex is today used in both vertical applications like e.g. despatch in the transport sector and horizontal applications like e.g. E-mail and database access. Within the unit Market Planning & Support we are looking for a person to explore and promote certain segments or applications. This means e.g. defining market drivers and needs of a selected segment or application, supporting providers of applications, co-ordinating availability of applications, developing sales tools, organising seminars and workshops, assisting at fairs, customer presentations etc.

Applicants should have a clear market orientation and have a university degree in either business administration

and/or engineering. Experience and knowledge in a market segment like Telemetry, Point of Sales (Credit card transactions), Transport, Field Service and Sales or/and data communications would be a large advantage.

Contact: Jan Gapinski, 08-7573603, Memo ERASJGA or Kristina Johnsson, personnel, 08-7571449, ECSKRJ.

Ericsson Telecom AB, Market Opns Middle East, Kungens Kurva

### MANAGER PRODUCT MARKETING

The present manager for the Product Marketing Unit at Market Operations Middle East is taken up a new position abroad therefore the Unit now is looking for a manager with a strong proactive marketing approach and with the ability to lead a team with very competent members within the field of Switching, Transport Network, Access and Operation Support Systems. In addition to the unit's present main task to perform active product marketing within the frame of established marketing strategies and product plans, the unit will take an active part in the role of Product Management.

To grant a further success for the business in the Middle East the Product Marketing Unit will play a key role and will require a manager with a strong technical competence within more than one product area and commercially driven. To develop the unit and the team a good management profile is a basic requirement.

Contact: Bo Nilsson, 08-6812878, Memo ETXBN, Magnus Kamsund, 08-6811228, ETXMGKA or Stefan Mogel, personnel, 08-7196941, ETXMOGS.

Ericsson Telecom AB, Market & Opns Africa & Latin America, Kungens Kurva.

### BUSINESSMEN

We are looking for businessmen to accept the challenge to make our installed customer base profitable for us. You will market and sell customer service, upgrades, features, etc to the installed customer base in co-ordination with local companies. You will do Market Analysis, Business Creation, Proposing and Negotiation. Travels and contacts with customers and local contacts will be a natural part of your time. We would like you to have experience from marketing and complex selling and of selling services, technical or commercial academic exam, knowledge in telecom, maybe from an operator's perspective, knowledge in English and other languages and international experience. You are used to work towards challenging goals. You have a combination of the stated qualities in various degrees. What you lack we will provide in a competence development program.

Contact: Johan Westberg, 08-7194399, Memo ETXJOHAN or Britt Paju, personnel, 08-7195600, ETXBP.

Ericsson Telecom AB, BU Transport Network Systems, Kungens Kurva

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Contact: Taieb Djerbi, 08-7195441, Memo ETXT.ETXTADJ or Catarina Larson, personnel, 08-7190836, ETXT.ETXL-CAT.

Ericsson Telecommunications Inc. Manila - Philippines

### MARKETING MANAGER - CELLULAR SYSTEMS

The cellular market in the Philippines has started to grow rapidly since the deregulation started. At present there are five operators operating AMPS as well as TACS and GSM systems. During 1995 PCS/PCN as well as fixed cellular will be added to the list. In order to further strengthen our BR organisation we need urgently to recruit a marketing manager for cellular systems.

Initially the marketing department will consist of 4-5 persons (key account managers). The assignment will include to further develop the partnership with our TACS customer SMART, to monitor and market Ericsson towards the other cellular operators, to focus on PCS and fixed cellular pre-sales activities and to handle market planning and coordination.

We assume that you have at least 2-3 years of marketing skill of cellular systems, knowledge about working towards demanding customers and that you are a dynamic and open minded person with good team spirit and interest in Asia. We can offer you an inspiring and creative assignment for a minimum of 2 years.

Contact: Klas Lundgren, +63 2 8926139, Memo ERAKL, Anders Ekström, 08-7572367, ERAAE, Jan Signell, 08-7573609, ERAJWS or Hans Falk, personnel, 08-7571402, ERAHFA.

Ericsson Telecom AB, Market Operations Africa & Latin America, KK

### PRODUCT MARKETING - SWITCHING & SDH

Product Marketing at G-region is a job that requires good technical ground, business orientation and customer understanding. It means proactive marketing through seminars, workshops, field studies, business cases etc. etc.. It means identifying and understanding our customers needs and to give him our solutions. It means working towards 2 exciting continents with direct contacts with local companies and customers.

If it sounds interesting ...

Contact: Hans Karlsson, 08-7199517, Memo ETX.ETXHLK.

## PRODUCT MANAGER.

Ericsson Radio Systems AB, Kista

### PRODUCT MANAGER IPR

Business Unit for Cellular Systems - American Standards (RMOA) offer products for PCS networks in the 800 and 1900 MHz frequency bands based on the digital D-AMPS specification. IPR, Intellectual Property Rights, is an important product area that offers interesting opportunities for enhancing our business. Your responsibility includes define patent strategies, create and maintain a patent portfolio for cross-licensing negotiations with other companies, prioritize patent applications, profitability analysis, secure patent activities within our development projects and analysis of competitor patent portfolios. Many of the activities are done in cooperation with our development organization, various patent organizations at, eg BR/R, RCUR, LME/B, RTP, LMC, external law firms and of course our own patent project managers at RMOA.

Contact: Magnus Isaksson, 08-757 2678, Mats Blumenberg, 08-757 3310, or Eva Edberg, 08-7570971. Ans. till KI/ERA/AH Britt Bosrup, Memo ERARMOAA.

Ericsson Radio Systems AB, Kista

### TRAINEES - PRODUCT MANAGEMENT SERVICES

Product Management Services unit require 3 highly motivated persons with a master of engineering who have recently graduated. Our department works towards all worldwide AMPS/D-AMPS mobile telephone markets. We ensure that measurable, consistent and profitable Customer Services are delivered through our Global Service Organisation. Our training program will cover a 12 month period of courses, practical on job training and contacts with our service centers around the world. Participants in our job rotation program will need to be prepared for seas travel.

These posts are open for graduates in Electrical and/or Electronical Engineering and in Computers Sciences. The candidates must have an interest in the commercial aspects of telecommunications business.

Contact: Göran Nilén, 08-7575749 or Britt Bosrup, personnel, 08-7570109. App. to KI/ERA/AH Bosrup, Memo ERARMOAA.

Ericsson Business Networks AB, Nacka Strand

### PRODUCT MARKETING MANAGER VOICE PROCESSING

The Call Center and Messaging Unit is responsible for a comprehensive product portfolio for this growing market segment. Our voiceprocessing products the Voice 100/200/300 represent a substantial revenue and profit for EBC.

You will be responsible for a number of products in the area of Voice Processing. You will have commercial responsibility for these products and vendor relationships. You will support the Local Companies and distributors in successful

introduction and sales of the product. You will specify requirements for new products and features. You will work both internally within the EBC organisation, as well as with a number of vendors.

The requirements for this position is a Master degree in BA Marketing or Engineering. Qualified candidates will have strong market orientation, as well as the interest and ability to understand technology. Excellent leadership and communications skills, verbal and written are required. You will have a number of international contacts, therefore fluency in English is a must.

**Contact:** Mikael Nilsson, 08-6824513, Memo EBCMINN. Appl. to NA/EBC/F/H Susanne Pettersson.

**Ericsson Mobile Communications AB, Kista**

**PRODUCT MANAGER  
RADIO MODEM S/W**

The emerging field of Mobile Data creates opportunities for new and exciting data communications solutions. Wireless E-mail and mobile computing are examples of already existing applications. We are looking for a person to be responsible for Mobitex Radio Modem connectivity and S/W products. This includes handling of S/W releases, and implementing and further develop our terminal connectivity strategy. You will be working together with internal and external development centers and partners as well as our local sales companies.

Desired qualifications are university level degree in Engineering or computer Science, and experience with data communications design or implementation including PC and LAN. Fluency in English is a requirement.

**Contact:** Jan Nordgren, 08-7572435, Memo ECSNORD eller Kristina Johnsson, 08-7571449, ECSKRIJ.

**PROJECTS**

**Ericsson Telecom AB, Systems Management & Design, BU-Local, TN**

**PROJECT SYSTEMS MANAGER  
FOR FM-P5**

Our mission is to secure periodic system releases of our active Product Lines and Source Systems which fulfil requirements on time plans and functionality, minimize costs for development, maintenance and handling and the need for market design, ensure the upgradeability of the systems and fulfil requirements on characteristics and quality.

You will be working in the system group of the project, which is responsible for the System Study/ System Modelling & Analysis during the Pre-/Feasibility Study phase. The group is also overall technical responsible during the execution phase of 12.4. You will be working in the central project office and the system as a whole referred to as the GAS, Global Application System, is the deliverable.

You should have several years of AXE experience, have experience from large development projects, and be familiar with the Application Module (AM) SW-architecture. If you have leadership qualities, you will be the leader of the System Group.

**Contact:** Monika Swensson, 08-7194721, Memo ETXT.ETXSWE, or Eva-Carin Svensson, personnel, 08-7191616, ETXT.ETXESV.

**TECHNOLOGY**

**Ericsson Radio Systems AB, Kista**

**TECHNICAL WRITER**

The unit, Radio Implementation, is responsible for development methods for installation, commissioning and maintenance of the AMPS/D-AMPS radiobase system, CMS88. These methods are documented and become part of our user documentation. The technical writer will take an active role in the product development and collection of information. Preparation of the documentation, in both text and graphics, will also require participation in the development of new methods and media within the user documentation area.

We are looking for individuals who have technical writing experience and preferably, to have English as their native language.

**Contact:** Stefan Lind, 08-7570901, Memo ERASL. Appl. to KI/ERA/AH J-O Segerfeldt, ERARMOAA.

**Ericsson Telecom AB, Network Operator Products, TN**

**SYSTEM ENGINEERS**

The Product Group Network Operator Products is responsible for products aiming at enhancing operations of the BU Local customers. Traditionally we have spent much effort

on O&M products for AXE, an area where we today are very competitive. To keep this position we must provide our customers with even more cost effective solutions. These must support new technologies and applications such as Management of Cordless Terminal Mobility and TMN Alignment.

You probably have a background in Systems Management or Design, and have competence in one or several of the following areas: Operation Support Systems, AXE 10, TMN, Object Oriented Design, especially the early phases, and/or UNIX Design Environment.

**Contact:** Stefan Carlsson, 08-7197541, Memo ETXT.ETXSTCA or Nils Bertil Kindgren, 08-7198299, ETXT.ETXNBK.

**Ericsson Business Networks AB, Nacka Strand**

**NETWORK ARCHITECTS**

You will be responsible for sales support activities for the Wide Area Data Networks products. An important part of that is to prepare network proposals for different customers. You will also participate in the discussions and nego-

tiations with the customers. When the contracts are signed you will be responsible for the start up of implementation projects.

Bachelor or masters degree in engineering or equivalent. A minimum of five years theoretical and practical experience in data communications, preferably from LAN, internetworking and frame relay applications, from ERIPAX is an advantage. Excellent communication skills, fluent in English and a Scandinavian language verbally as well as in writing and a pedagogic talent are other important characteristics.

**Contact:** Rolf Johansson, 08-4220146 or Erik Edhag, personnel, 08-4220000. Appl. to NA/EBC/FH Edhag.

**Ericsson Business Networks AB, Sundbyberg**

**SUPPORT ENGINEERS - REGIONAL  
SUPPORT CENTRE IN SWEDEN**

We organize and administrate worldwide support and our contracts are based on professional technical assistance on MD 110, ERIPAX and IDNX products. The customers we serve have installations all over the world, both as stand alone systems and global networks, which we mainly serve

by remote interrogation. We work in a very developing and interesting area that has shown an enormous potential for the future, both technically and financially and is growing rapidly. Your main task will be to give technical support to our customers as described above. You must be prepared to travel abroad with short notice.

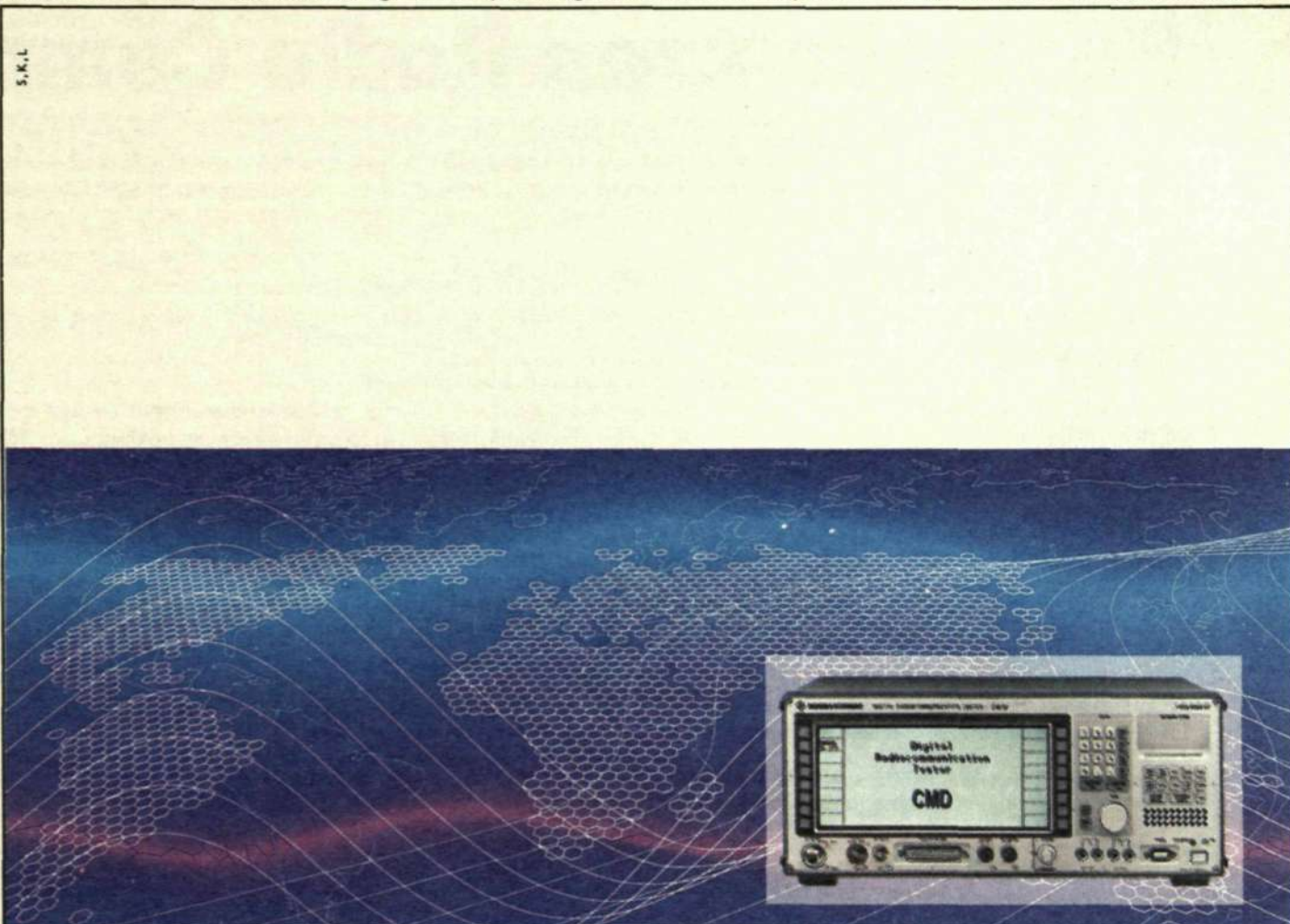
The requirements for this position is minimum four years of technical college or equivalent. Qualified candidates will have three to five years of technical work experience within product areas such as MD 110, ERIPAX and/or IDNX. Excellent customer-oriented attitude and good English language skills are other important characteristics.

**Contact:** Kristian Teär, 08-7640502, Memo EBCTEAR or Erik Edhag, personnel, 08-7420088, EBCERED.

**Ericsson Ltd, Business Networks, Systems Support, UK**

**SYSTEMS SUPPORT ENGINEERS**

to provide technical product support and management at the highest level for the Ericsson MD110 resp. NET IDNX range within the remit of the Multimedia group. To participate in the provision of an area of technical excellence such



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advanced user guidance for unparalleled ease of use. Autotest routines that allow complete testing of a radio telephone without operator intervention. And module tests, indispensable for service work. Plus the distinction of being the only tester on the market that can measure power ramps to GSM specs (more than 72 dB dynamic). And finally high-speed remote control for high production throughput. All this backed by the full service and expertise of a market leader.

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that our customers and suppliers regard ETL/B as a company with the highest technical standards and competence. The roles have three main areas of responsibility: Technical Product Management, In-depth Technical Support and Systems Integration.

As **MD110 Product Specialist** you have been working with the Ericsson MD110 product in an in-depth technical support role for at least 3 years. This experience should include excellent overall system knowledge and software programming experience.

Experience will preferably have been gained in both pre and post sales technical support roles. You have been working in the communications industry (including PABX, TDM) in a technical role for at least 5 years and have experience in TDM, X25, SNA, Frame Relay, IP, IPX and/or ATM. The candidate should ideally be qualified to degree level in an appropriate engineering or science discipline.

As **IDNX Product Specialist** you have been working with the NET IDNX product or with a closely related competitor in an in-depth technical support role for at least 3 years. Experience will preferably have been gained in both pre and post sales technical support roles. You have also been working in the voice and data communications industry in a

technical role for at least 5 years and have experience in Routers, Frame Relay, Network Management, ISDN, X25, SNA, IP, IPX and/or ATM.

As **Network Management Specialist** you have been working with standars based Network Management Systems in an in-depth technical support role for at least 3 years. Experience will preferably have been gained in both pre and post sales technical support roles. You have in-depth knowledge of two or more of the following network management platforms: HPopenview, SunNet Manager, Netview 6000 and in-depth knowledge of one or more of the following management applications: Ciscoworks, Chipcom ONdemand, NET/Open Series 5000, Ericsson NM400, Synoptics Optivity. You have been working in the data/voice communications industry in a technical role for at least 5 years. Experience in any of the following and advantage: Routers, Frame Relay, Network Management, ISDN, X25, SNA, IP, IPX and ATM.

The candidates should ideally be qualified to degree level in an appropriate engineering or science discipline.

**Contact:** Kirstie Free, Memo ETLKEFE or Steve Jarman, ETLSEJN.

**Ericsson Hewlett-Packard Telecommunications AB, Mölndal**

### SOFTWARE DESIGN, TEST AND CM

Within the BSS (Business Support System) unit we are responsible for the development of our present EHPT product portfolio in TIMS, our flexible billing/customer service system solution, BIP, our proven billing data collector, SOM, our Service Order Mediator for fixed networks.

Foreseen projects are development of billing/customer service solutions for Analogue Mobile Networks in co-operation with ERA (RMOA) - this could be further developed for GSM and PCS networks, development of solutions where combinations of BIP/TIMS/SOM are used to support reengineered business processes, development of billing/service management solutions for new type of network (IN, ATM-broadband etc.) The most urgently needed resources are software designers for development of our Mobile TIMS package, experience from mobile database experience and some C programming skill would be an ideal background. Software designer for development of customer specific function where experience from UI design and an interest

for customer contact is a good start. Test and configuration management candidates. The test group will have a busy year and someone with experience from this type of work is most welcome.

**Contact:** Lars-Erik Gustavsson, 031-671752, Memo EHS-LAER.

## INTERNATIONAL

**Compedex UK Limited, Bletchley, England**

### INTERNATIONAL SALES SUPPORT

Satellite Communications - Radio Paging Industry. We are an Ericsson subsidiary specialising in the supply of data communications and satellite equipment for the world-wide radio paging industry. With rapid growth and expanding markets we have an immediate vacancy for a sales support person.

Capable of understanding data communications systems and evaluating customer requirements the right appli-

# Business Area Radio Communications

*Ericsson Corporatia AO (ECR) is the recently established local company in the Ericsson group located in Moscow, Russia. ECR is responsible for all Ericsson market activities in Russia. Already many contracts have been signed for cellular systems (NMT, AMPS/D-AMPS, GSM) as well as trunked mobile radio systems (EDACS).*

*The company expects major growth in 1995. In addition to that a number of joint ventures are foreseen in the areas of training, research and development, software and consultancy.*

*To build up the company we are seeking dedicated and energetic*

*colleagues, to be placed as expatriates on short- or long term contracts.*

*Your main task will be the hiring and training of local employees, and organise the contacts necessary with both the home organisation as well as the customers in Russia. Applicants should have at least 5 years experience in Ericsson, preferable in the area of radio communications. You must be fluent in English and willing to learn Russian. Management experience and working experience from Russia are of value.*

## COMMERCIAL

### Manager Marketing and Sale

The manager of this department is responsible for the local marketing, the budgets, the forecasts and the reports of its employees.

As manager you have a special task in hiring and training the local staff and establishing the working and administrative routines.

You are responsible for the contacts, and reporting to the business unit managers within the business area.

You are personally involved in key-customer contracts.

A marketing background is necessary, as well as previous management experience in Ericsson.

### Sales/Account Managers

Tasks and Responsibilities:

- o Management of selected accounts
- o Building long-term customer relations
- o Offers, contracts and projects follow-up to the accounts
- o Sales, budgets and forecasts to the selected accounts
- o Sales of products, systems and services of Ericsson

Knowledge and Experience:

- o Experience with commercial work in Ericsson
- o General technical training on Radio products (NMT, GSM, AMPS/D-AMPS, AXE)

**Contact persons:**

Eric Franke, Hans Jeborn, Håkan Jonasson

## PRODUCT MANAGEMENT

### Manager Product Management

The manager of this department is responsible for the local product management, the budgets, the forecasts and the reports of its employees.

As manager you have a special task in hiring and training the local staff and establishing the working and administrative routines.

You are responsible for the contacts, and reporting to the business unit managers within the business area.

You are personally involved in key-customer contracts.

### Local Product Managers

Tasks and Responsibilities:

- o Technical support for RMOG and RMOA products
- o Support Account Manager and their customers on technical issues

- o Technical contents in offers, contracts and project operation
- o Coordination with Account Management and Market Operations
- o Coordination with RMOG or RMOA Product management
- o Technical presentations and seminars

Knowledge and Experience:

- o Experience with product management work in Ericsson
- o Detailed technical training on CMS products and radio communications
- o Technical educations (M. Sc. or equivalent)

**Contact persons:**

Eric Franke, Hans Jeborn, Håkan Jonasson

## OPERATIONS

### Manager Operations

The manager of this department is responsible for the local operations, the budgets, the forecasts and the reports of its employees.

As manager you have a special task in hiring and training the local staff and establishing the working and administrative routines.

You are responsible for the contacts, and reporting to the business unit managers within the business area.

You are personally involved in key-customer contracts.

A project management background is necessary, as well as previous management experience in Ericsson.

### Operation Support Managers

Tasks and Responsibilities:

- o Project Management of RMOG and RMOA projects
- o Secure, hire and train local competent Operations personnel
- o Local support activities toward the global RMOG or RMOA support organisation
- o Coordination with Account Management and Product Management
- o Establish reporting routines
- o Operation budget and forecast
- o Resource planning

Knowledge and Experience:

- o Experience with project management work in Ericsson
- o Detailed technical training on CMS products and radio communication

**Contact persons:**

Eric Franke, Hans Jeborn, Arne Palkvist

## MARKET COMMUNICATIONS

### This position is a short term contract

Tasks and Responsibilities:

- o Internal and external market communications
- o Press and mediacontacts in Russia
- o Advice on Ericsson identity and style
- o Organise events
- o Hire and train local employee(s) for Market communications
- o Sales, budgets and forecasts to the selected accounts

Knowledge and Experience:

- o Experience with market communications within Ericsson
- o General knowledge of Ericsson products
- o Knowledge of the Ericsson organisation
- o General knowledge of the Russian culture

**Contact persons:**

Eric Franke, Hans Jeborn, Håkan Jonasson

## FIELD SUPPORT CENTRE

**Implementation Engineers**  
**Installation Engineers**  
**RBS Senior Support Engineers**  
**AXE Senior Support Engineers**

**Contact persons:**

Bo Ekström, Neil Urquhart, Dragan Radic

### Contact persons:

**Ericsson Corporatia AO**  
Eric Franke, +7 095 2476211, fax +7 095 2052667, memo ETM.ETMERFR  
Dragan Radic +7 095 2476211, fax +7 095 2052667, memo ETH.ETHDRA

**Ericsson Radio Systems AB**  
Hans Jeborn, +46 8 7575957, memo ERA.ERAJEO  
Håkan Jonasson, +46 8 7572842, memo ERA.ERAJUN  
Bo Ekström, +46 8 7570241, memo ERA.ERABOEK  
Neil Urquhart +46 8 7570475, memo ERANLUT  
Arne Palmkvist +46 8 7570422, memo ERABRP

### Send your application to:

Ericsson Mobile Communications AB  
Eva Jansson  
164 80 STOCKHOLM

**ERICSSON** 

can will be required to meet potential and existing customers, evaluate their requirements and prepare offers and technical information.

The position requires the applicant to be willing to undertake international travel and to be able to negotiate at all levels with major customers, both for routine business and capital projects.

**Apply in writing to:** Compedex Ltd, Avant Business Centre, 23 Denbigh Road, Bletchley, MK1 1DT, England. Mark: "INTSALES".

**Ericsson Telecommunications Pte Ltd., Malaysia**

**MARKETING MANAGER**

Malaysia is today the most liberalized telecommunications market in Asia. Nine (9) network operators have got licences to operate cellular and/or fixed networks in the country. The new players on the Malaysia market emphasize introduction of modern technologies, fast deployment of services and quick response to requests.

The amount of business opportunities is big and keep increasing. This is why we, ENO Singapore, need to place a SENIOR MARKETING MANAGER in Malaysia, with broad telecommunications background. The position requires the ability to commercially market and conceptually motivate different complete network solutions.

We expect the applicant to have good commercial sense, a broad technical understanding and good communications skills. Good co-operation with existing account managers is key to good achievements.

**Contact:** Petri Markkanen, +65 350 1593, Memo ENOPM or Chua C.L., +65 350 1560, ENOCLL.

**Ericsson Radio S.A., Leganés, Spain**

**GSM SYSTEM SUPPORT EXPERTS**

Due to the rapid expansion of the first operator GSM network in Spain, we have five open positions in our Field Support Center at REE in Madrid for BSC's or MSC's experts. The tasks are implementation of CNA's, ACA's and new releases, customer support, fault analysis, etc.

Two positions are directed to BSC and three to MSC. At least four years experience with AXE-10 is required as well as documented experience in GSM (BSC or MSC) testing and/or support during the last two years.

**Contact:** Juan Corraliza, Memo REE.REEJCAL, Tel. +34 1 3391036 or Juan-Manuel Palmier, Memo REE.REEJMP, Tel. +34 1 3391979.

**Ericsson Business Networks Engineering, Nigeria**

**MOBITEX MAINTENANCE SUPERVISOR**

For the Mobitex Network for Shell Petroleum Dev Co in Nigeria we are looking for a maintenance supervisor to be based in Warri. The mobitex network consists of one network control centre (NCC), one main exchange (MHX), two area exchanges (MOX and twenty base stations (EBC) and covers the Niger River Delta. Approx 200 mobile units have been delivered but up to 3000 units are expected before long.

The maintenance supervisor reports to the maintenance manager in Port Harcourt and the responsibility includes co-ordination of all maintenance activities related to the Mobitex Network and the local Ericsson engineers stationed in Warri and Port Harcourt. Monthly reports, maintenance records, supervision of spare parts supply and responsibility for the Ericsson compound (office and accommodation) and general administration in Warri are other tasks.

The applicant should be fluent in English, physically fit to work, travel and live in Nigeria and have a medical certificate to climb towers. A lot of the base station sites are only accessible by helicopter or speed boat why the applicant must fulfil the Shell requirements for a swimming certificate. The position is offered on a semi-bachelor basis only.

**Contact:** Mats Karemyr, +46 8 7640773, Memo EBCMAKA or Yara Sohlström, +46 8 7640487, EBCYASO.

**THE GLOBAL RESPONSE CENTER (GRS) ORGANIZATION CUSTOMER SUPPORT ENGINEER**

The Global Response Organization will be established during 1995. Three GRCs will be established located in USA (Dallas), Australia (Melbourne), and Holland (Rijen). As a result there is a number of openings for support engineers with a few (a minimum of 4) years experience in support of AXE.

You should have proven ability to solve complex technical problems and trouble shooting experience with regard to systems that are in operation. The product area initially targeted for AXE are APZ, IOG, and GSS, but a wider scope of products are to be supported at a later stage (1996 and forward).

Since this is an operation in its start-up phase, it is of utmost importance that you have a great deal of pioneer spirits and enthusiasm for the task. It is equally important that you have initiative, tact and diplomacy, since the position will result in contact with customers that are in distress. It is important that you have good communication skills in English. Knowledge in other language, i.e. Spanish, is to your advantage. If you have the qualifications, feel the challenge and have the dedication - then we need you!

**Contact:** Karin Hamberg, Project manager, phone +46 8 719 4663, memoid ETXT.ETXKAON or Jan Giese, personnel, phone +46 8 719 9357 memoid ETXT.ETXJG

**Ericsson Radio Systems AB, Kista**

**CMS 40 TECHNICAL PROJECT MANAGER, FOA**

CMS 40, the GSM based PCS 1900 system for North America, will be deployed in both US and Canada. In US we need to expand our first office application (FOA) organization. The technical project manager shall have a solid GSM experience and be able to solve technical matters on site. The technical project manager will receive a long term assignment in US starting Q2 1995, and will be placed at our local office close to the customer. The technical project manager will report to the overall PCS Customer manager on site.

Applicants should have several years of well documented experience in GSM testing and/or system support as well as Project Management. If you have creative power and the power of initiative then you are the right person for this assignment. In addition, you should possess clear-cut skills in communications and problem solving as well as a good command of English.

**Contact:** Roland Jensen, 08-7573475, Thomas Knutsson, 08-7572539 or Eva Andreassen, 08-7570908. Appl. to KI/ERA/LHC Andreassen.

**Ericsson Systems Expertise Ltd, Ireland**

**PROJECT MANAGERS**

Currently, Business Area Switching is involved in the deployment into the Irish Network of a number of advanced AXE Systems. Within the next 18 months Ericsson will upgrade the installed base to integrate ISDN and CLASS services into the Network and add Intelligent Network functionality to Local Exchanges. In addition Ericsson will compete for the provisioning of Network Management Systems and Access Systems. To meet these challenges and recent organisational developments, a position has arisen for a Projects Manager reporting to the Business Area Manager Switching.

The responsibilities of this position will include, management of Switching and related projects from initiation through marketing, sales and Project Management, to satisfactory conclusion in terms of delivery precision, quality, costs and commercial requirements, and with regard at all times for the customer's perspective.

Candidates will either be qualified at degree level or will have acquired, through experience, sufficient relevant technical and business expertise in the areas outlined to be able to function independently, at an appropriate professional level on specific projects.

Cognisant of LMI's growth ambitions, the ability to create new opportunities within the market place will be an essential characteristic of the successful candidates profile. Intending applicants should be competent in both written and verbal communication to achieve effective co-operation, with internal / external customers. He / She will be innovative and creative with the ability to recognise / develop business opportunities within Switching.

Based in Beech Hill, Clonskeagh, this varied and challenging position offers exciting career prospects combined with the opportunity to strengthen and develop the Business Area Switching function. As a screening process based on applications received will take place, it may not be necessary to interview all applicants.

Applications are invited from those who consider that they can meet the above criteria. Applicants should apply in writing enclosing a comprehensive Curriculum Vitae to the undersigned.

**Contact:** Margaret Gaffney Personnel Officer, LM Ericsson Ltd, Beech Hill, Clonskeagh, Dublin 4. Memo ID LMIMGY

**Ericsson Ltd, Hong Kong**

**MARKETING MANAGER FOR CELLULAR SYSTEMS and OPERATIONS MANAGER FOR HONG KONG**

Challenging positions are available in the worlds most dynamic business community. The HK Government shall be issuing 6 PCN and 4 PHS/ DECT licenses to bidding operators in the summer. These new licenses will be in addition to the existing 10 analogue and digital licenses already issued.

EHK needs good people with the right background to secure this potential business and at the same time offering good conditions in an interesting commercial and political environment. The EHK office has grown dramatically in the last 6 years and is now 180 people strong. It is a regional office of the newly formed MLC in Beijing, ETC.

The successful candidates will join the new customer-oriented organization which fully utilizes the Core 3 concept of having Marketing, Operations and Product Management people under one functional management. This organizational structure has proven to strengthen our focus on the customer with encouraging results. We need;

**MARKETING MANAGER**

The assignment will include but not be limited to - Full business management responsibilities towards one of our customers.

- Liaise with other division members to provide a total support package to the customer.
  - Promote and expand new business ideas and products.
  - Develop and train local staff in the marketing process. To be eligible for consideration, we assume that:
    - You have at least 2-3 years in cellular or public system marketing.
    - You have an good understanding and first hand experience with commercially and progressively minded customers who demand quick and professional responses to their needs.
    - You have the personality and the desire to work in a strong team work environment.
- The position is for an initial period of one year with extension possibilities. As well we look for an;

**OPERATIONS MANAGER**

We are needing an energetic Operations Manager ready to take on the formidable task of managing the complete operational support function of a variety of public and cellular systems.

- The assignment will include but not be limited to:
    - Maintaining the existing FSC for our Local, International and Cellular (TACS, DAMPS & GSM/PCN) customers.
    - Provide implementation services for turnkey & & supervision to AXE and radio installations.
    - Administer and develop the existing Support Agreements.
    - Coordinate the EHK Training Centre staff who are also participating in testing and commissioning.
    - Monitor the efficient use of the GSM test plant in cooperation with the ESO in Kista.
    - Recruit and develop local staff
- The position is for an initial period of one year with the possibility of extensions.
- If you fit into the above categories and are interested in being a part of the dynamic growth of telecommunications in one of the world's leading commercial centres, please contact:

Charles Henshaw General Manager Public & Cellular Systems Division Phone: (852) 590-2360 or MEMO EHK.EHKCHW. Pls send your applications to ERA/LDH Hans Falk Human Resources, Phone 46-8-757-1402 MEMO: ERA.ERAHFA

**Ericsson Systems Expertise Ltd, Ireland**

**VERIFICATION/MODIFICATION HANDLING LEADER FOR CME PRODUCT DEVELOPMENT TEAM.**

As a result of the new project organisation at EEI/R, applications are invited for the position of CME Verification and Modification Handling Leader. Reporting to Michael Gallagher, you will be, together with the other members of the CME Product Development Team (PDT), jointly responsible for the operation of and modification handling activities. Specific responsibilities will be

- Resource planning and execution of testing for CME projects.
  - Line Management functions for team of 10 testers.
  - Line Management functions for CME Modification Handling team.
  - Specification of test plant and tool equipment required for CME Function testing & Modification Handling.
  - CME Modification Handling.
  - Achieving company goals for TR/AC handling of CME products.
  - Achieving company goals for CNi handling for CME products.
  - Management of improvement programs (Time-to-market, ESSI, AC Handling etc.).
- Ideally the person will have 4/5 years of AXE experience with an indepth knowledge of testing/modification handling in AXE. As the position requires close liaison with all levels of staff/ customers, the successful candidate will be an excellent communicator and have a proven track record in the area of resource utilisation and staff motivation. As a screen-

ing process based on applications received will take place, it may not be necessary to interview all applicants.

**Application** for the above post should be sent in writing, enclosing a detailed Curriculum Vitae to the undersigned before Monday 20th February 1995.

Anne M.O'Sullivan Personnel Officer Memo I.D. EEIAOS Ericsson Systems Expertise Ltd., Beech Hill Clonskeagh Dublin 4

**Ericsson AS, Norway**

**TMOS SUPPORT ENGINEER**

After Sales Support (A/F) is a department in division tele-nett at ETO. WE are working with Customer Support of AXE (GSM, NMT, ISDN, IN) and TMOS systems on the Norwegian market. With focus on Customer Services, our department will in the next years have a central role in communication and business towards our Customers. We are located in beautiful surroundings at Hisøy near Arendal.

We are now looking for people interested in working as "TMOS SUPPORT ENGINEERS", and are looking for YOU:

- With experience from TMOS /Computer-/Telecom systems.
- With experience from one of; Unix, Sybase, X.25, OSI.
- Who are service minded and have good communication skills.
- Who are able to cooperate easily both within the company as well as with Customers.

Roles/Duties will be: Installation, test and deliveries, Customer Support and Customer Follow up, TMOS ACA packages and TR-handling, Technical support to our Market departments.

**Contact:** Anne Torunn Hvideberg, +47 3705 1784, Memo ETO.ETOATH or Steinar Strömsvåg, +47 3705 1787, Memo ETO.ETOSTST

**Technology Ericsson Radio Systems, USA**

**1. CUSTOMER SUPPORT:**

The primary functions are applications systems change-outs, CNA testing and introduction, correction testing and deliveries, trouble shooting and telephone support. Four years AXE experience with a BSEE. Customer and quality oriented. Excellent interpersonal skills required.

**2. MAINTENANCE ENGINEER:**

In depth knowledge of AXE GSM/PCS and other cellular systems with emphasis on tracing and trouble shooting. Able to solve SW, HW, and DT issue with the customer. Will work with engineers including TAC, Design & Customer's staff. BSEE or BSEET, or equivalent experience. Comprehensive knowledge of AXE switch; 3 to 5 years hands-on experience. Travel required.

**3. RF ENGINEERS:**

Provides technical design, implementation of new RSA Cellular Systems to meet customer requirements. Design and optimization of Existing MSA Cellular Systems, develop plans for FOA and Beta testing of new features. BSEE plus 2 years of Cellular System Technology. 40% travel. Able to develop and present technical material to customers.

**4. SR SWITCH TEST:**

Responsible for final AXE Switch Testing and final project acceptance; also includes installation of application systems and CNAs; data transcript installations and testing hardware and software trouble-shooting, site hardware inventory. BSEE with 3 years of AXE hardware/software testing. Extensive travel; good communicator.

**5. RADIO TEST:**

Testing and limited installation of cellular radio base stations, digital switching interfaces, microwave and auxiliary systems. Associates Degree (2 yr.) and 2 years experience of testing complex radio communications systems. Some travel; and must have general class licenses and/or industry certifications.

**CONTACT:** Leo Evelith 214 705-7680 Memo EUS.EUS-LEEV.

**Ericsson Radio Systems AB, Kista**

**PCS OPPORTUNITIES IN NORTH AMERICA**

Exciting opportunities await you this year in North America when Ericsson introduces its Personal Communication Services. PCS is the future of mobile communications. It will offer its end-users total mobility and wide variety of services at a low cost. Ericsson is putting a great deal of effort into this rapidly growing, highly competitive market and now we need your involvement. We need qualified engineers with

GSM experience for short and long term assignments in US or Canada in following areas: Product Planning and Management, Project Management, Network Engineering, Radio Engineering, Data Transcript, Switch Testinm OSS Implementation and Testing, System Support, Hardware Repair and Training.

Applicants should have several years of well documented experience in the respective disciplines and solid GSM experience. If you have creative power and the power of initiative then you are the right person for this assignment. In addition you should possess clear-cut skills in communications and problem solving, as well as a good command of the English language. You must also be willing to travel. If you have previously worked as a supervisor or have other management experience it will be considered an advantage.

You are expected to start your assignment during the first of July 1995. The locations have not yet been defined.

**Contact:** Gogo Landén, phone 08-757 22 42 Eva Andreassen, phone 08-757 09 08.

**Ericsson Communications Canada, Montreal (LMC)**

### APZ SUPPORT ENGINEER FOR THE TECHNICAL ASSISTANCE CENTER

The job involves Technical Support for North America and Canada, within the APZ field. We require a self motivated person, with in depth knowledge of Trouble shooting methods as well as the ability to perform technical investigations into all aspects of APZ Software/Hardware problems in the CP/RP/EMRP. The candidate must have proven ability in Test System, CPT and System Stoppage Handling. Will be necessary to handle ongoing Trouble Reports, therefore knowledge of MHS would be an asset. It will be a 2 years contract, although some travel will be required as well as pager rotation within the group.

**Contact:** Adrian Gilli, Memo LMC.LMCADGI.

**Ericsson Inc., Richardson, USA**

### SALES MANAGERS

Increased demand for our products has created new openings within our sales organization for three Sales Managers with a BS/MS in Engineering/Marketing or a MBA with 7-10+ years' related telecommunications (digital switching, intelligent networking, etc.) experience. These individuals will represent Ericsson in regards to the sale of public network telecommunications products and services, as well as provide customer support to primary, high opportunity and emerging accounts.

Each position requires the skill to interface successfully with executive-level customers and the ability to interpret complicated technical issues. A progressive, documented track record in developing new and expanding existing accounts is required.

If you are interested in pursuing these opportunities, please forward your internal application (summary of experience and educational credentials) to Stacey Simmons, EUS/HR, M/S F-36, or by memo EUSSIM. Please reference job code DMN/SM.

**Ericsson GmbH, D-esseldorf**

### PRODUCT MANAGEMENT SPECIALIST

Ericsson GmbH is the major local company of Ericsson in Germany. We are located in Duesseldorf and responsible for all Tele-com activities on the German market. In the area of GSM, our main Customer Mannesmann Mobilfunk is operating the largest private GSM Telephony Network in the world. You will be responsible for the handling of customer inquiries, for the support of the introduction of new CME 20 releases and for the planning of new functions.

You will have close contact to both the customer as well as to all relevant parts of the Ericsson organization, especially to other EDD internal branches like Marketing and Technical.

As a qualified candidate, you should have at least five years overall experience with AXE-10 based switching systems and preferably good knowledge of GSM and the Ericsson CME 20 system. Excellent communication skills are a prerequisite.

**Contact:** Dietmar Seidenberg, Memo EDD.EDDISE.

**Ericsson Telecomunicazioni S.p.A., Roma, Italy**

### TESTER

Ericsson Telecomunicazioni is the supplier of one of the biggest TACS network over the world. The current network is upgraded to the package 91B2 (CNA-9). In 95 the network will be upgraded to the package 92C+A; to support such activity we need people in two different positions.

As a tester you will work in close cooperation with our people in internal verification, acceptance test with customer and field support for first installation (FOA).

Candidates applying for Senior Tester position should have at least 4 years of experience in integration tests for MTS and some experience in the package 92C+A.

Candidates applying for the Junior Tester should have at least two years of experience in integration tests for MTS and some experience in the package 92C+A.

For both positions experience in Stand Alone HLR is also required.

Contractual period is 6/12 month.

### TROUBLE SHOOTERS

They will work in cooperation with our people of After Sales Department. Their main jobs are: customer care, system support, trouble analysis and trouble shooting, test and release of ECA. They will also be involved in release of AC-A and CNA in cooperation with the ESO people.

Contractual period is 8/12 month

For both positions the job is located in Rome (business trips could occur in Italy).

**Contact:** Nazzareno Fattori EITA.TEIFAT Marco Silvestri EITA.TEISIL

**Ericsson Technika Kft. Budapest**

### GSM (CME 20) SYSTEM SUPPORT EXPERT

Due to the rapid expansion of the Westel 900 GSM network in Hungary we have a vacancy for one GSM (CME20) system expert on long term assignment at our Field Support Centre at ETH. in Budapest.

The candidate for the position should have working experience at FSC or ESO environment, expert ability to investigate and solve SW faults, to work in emergency situations and remain calm and to create good customer relations.

**Contact:** Tony Bradshaw, + 36 1 2657138, fax + 36 1 2657357, Memo ETH.ETHANBR.

**Ericsson Eurolab Deutschland, Aachen, Germany**

### AXE10 SYSTEM DESIGNER

The AXE Mobile Core System Group is responsible for the system development of the core products used commonly by all Ericsson's digital mobile systems ie. CME20 (GSM), CMS30 (PDC), CMS40 (PCS) and CMS88 (D-AMPS). In future projects we will adopt the core to AM concepts and develop the IN-AM. Running PC-APT 210.15 as well as overall technical coordination of the Projects in the AXE Mobile Core (AMC) are responsibility areas of the system group. We are looking for an experienced system designer with more than 5 years of Ericsson experience to coordinate the technical work in this challenging AMC environment. An Expatriate contract is offered for this position.

**Contact:** Hartmut Boehmer, EED.EEDHBO, +49 2407 575 231 or Odd Svesse, EED.EEDODDS, +49 2407 575 133

### QUALITY COORDINATOR

The AXE Mobile Core (AMC) Product and Project Management Group is responsible for the AMC products and the running of AMC projects. The core products are used commonly by all Ericsson's digital mobile systems ie. CME20 (GSM), CMS30 (PDC), CMS40 (PCS) and CMS88 (D-AMPS). We are looking for a Quality Coordinator for the coming AMC projects. The person should have at least 2 years of Ericsson experience and should have worked with quality or process related tasks. A local contract is offered for this position.

**Contact:** Ulf Henell, EED.EEDUGH, +49 2407 575 256.

**Ericsson Ltd., Richardson, Texas**

### MANAGER CMS 40 MARKETING SUPPORT

The Manager, CMS 40 Marketing Support function addresses strategic business issues related to product marketing, business development, and technical sales support for Ericsson's CMS 40 business and other related Ericsson products and services. The product marketing function develops product strategy, champions new products to launch, and establishes product pricing and profitability. The business planning function tracks, analyses, and predicts business and market conditions and trends; develops Business Case studies, evaluates new business opportunities, forecasts product quantities and revenue projections. The technical sales support function supports the Marketing and Sales Department with customer presentation, customer questions, tender preparation, presentation material, competitor analysis and Industry Seminars and Conferences. The Manager reports to: EUS/RP, Bo Piekarski

**EDUCATION/EXPERIENCE:** B.S Engineering or similar scientific degree. MBA preferred. Five years in cellular market experience. Established expertise in new product and business opportunity analysis. Established credibility in

strategic business development and presentation. 5-15 years telecom product marketing and business development. Knowledge of GSM is an advantage. Excellent interpersonal and oral/written communication and presentation skills. Technical understanding of cellular and/or telecom systems preferred. Ability to recognize and interpret market related data and situations and draw relevant conclusions that affect the business and make recommendations. Achieve results in a matrix type organization. Develop, adapt and implement analytical business processes used to monitor business and market positions. Specific equipment and material used to perform essential job functions: PC, phone, Lotus 1-2-3/Excel, WordPerfect/Word, PowerPoint/Harvard graphics.

**Contact:** Tomas Mikaelsson, phone +46 8 757 1148 (Sweden) or Bo Piekarski, 009 (214) 952-8655 (US). Appl. and CV to RCHN/EUS/HR Liz Howells, personnel, 214 705 7678 or KI/ERA/LFH-LIH Gogo Landén, personnel, +46 8 757 2242.

**Ericsson Inc., Richardson, Texas**

### SR TECHNICAL SALES SUPPORT ENGINEER (Latin America)

**DESCRIPTION:** Key players supporting the Sales and Marketing Department with customer presentations and handling technical questions, requirements, and proposals for the Latin American region. Responsible for participating in key decisions in regards to the technical and commercial issues, both present and future, which deal with radio, switching, and networking aspects of the CMS40 in Latin America. Focal point for communication between the various Ericsson departments involved with new product development. Through Customer contacts, system requirements from the Latin American region are developed and passed through the organization.

Approximately 50% travel requirement. Familiarity with AXE operation and control. Overtime required. Fluent in written and oral English and Spanish.

**Contact:** Liz Howells (214) 705-7678 FAX (214) 952-8777

**Ericsson Inc., Richardson, Texas**

### BUSINESS SYSTEMS ANALYST

**DESCRIPTION:** Analyze and define business process, problems, routines and interfaces. Establish and document better processes and procedures. Work with users from all departments of varying technical skills and provide them technical, but understandable, analysis, solutions and guidance in financial and logistical issues.

**EDUCATION/EXPERIENCE:** BS in Computer Science or Information Systems or equivalent. 4 - 6 years' experience as a systems/programmer analyst. Previous experience with logistical and financial software. Expert Technical knowledge of AS/400 and/or System 38.

**Contact:** Rick Kivus (214) 705-7682 FAX (214) 952-8777

**Ericsson Inc., Richardson, Texas**

### PRODUCT MARKETING SPECIALIST

**DESCRIPTION:** The Product Marketing function combines marketing, business, technical, and intercompany coordination skills and responsibilities and supports the marketing and business development-based activities in the Sales and Marketing Department. The focus is on monitoring and analyzing the price/margin relationships for the business; product packaging and successful new product introduction; collection, dissemination, and coordination of competitive information; development of new product opportunities.

**EDUCATION/EXPERIENCE:** Bachelor's degree in Engineering, Marketing, or Business Administration. A Masters, Business Administration is a plus. Two years of previous experience in sales and/or marketing of large telecom systems or related areas. Excellent interpersonal and customer relations skills. Strong budgeting and finance background.

**Contact:** Liz Howells (214) 705-7678 FAX (214) 952-8777

**Ericsson Inc., Richardson, Texas**

### TECHNICAL TRAINING ENGINEER

**DESCRIPTION:** Instruct, in a classroom and lab environment, the functional operation of the Ericsson CMS 8800 cellular radio system equipment. This includes primarily RBS equipment, analog/digital/microcells and PCS. Secondary requirements include the AXE switching system, related system courses, and non-technical training as required. Responsibilities will also include preparation, correction and modification of lesson plans, instructor guides, and course materials. All instruction and development ef-

forts will be done in compliance with Ericsson training certification standards.

**EDUCATION/EXPERIENCE:** Comprehensive knowledge of telephony systems, transmission and/or switching principles with 4 or more years' experience. Extensive technical training experience in a professional environment. Technical associate degree with 2 years' practical experience in voice and data telecommunications, or equivalent experience level. Minimum of 2 years' experience in cellular mobile telephone systems or digital central office switching equipment is preferred. (BSEE/BSCS) also preferred.) 25% travel. Some international.

**Contact:** Liz Howells (214) 705-7678 FAX (214) 952-8777

**Ericsson Inc., Richardson, Texas**

### SWITCH TEST ENGINEER

**DESCRIPTION:** Responsible for AXE Switch Testing and accomplishment of final project acceptance, data transcript installations and testing, hardware and software troubleshooting, site hardware inventory, and spare board inventory. Cell site integration and features testing. The ability to train new testers.

**EDUCATION/EXPERIENCE:** BSEE, BSCS, or BSEET degree. Two years' experience with testing of AXE hardware/software; one year direct MTSO experience and detailed understanding of AXE preferable. Extensive travel. Ability to work overtime as required.

**Contact:** Rick Kivus (214) 705-7682 FAX (214) 952-8777

**Ericsson Inc., Richardson, Dallas**

### RADIO TEST ENGINEER

**DESCRIPTION:** Perform cellular radio equipment testing, commissioning and limited installation within schedule and quality guidelines. Perform testing of digital switching interfaces, microwave and auxiliary systems such as battery plant and rectifier testing. Perform system and acceptance test. Ensure that equipment meets Ericsson's specifications following testing.

**EDUCATION/EXPERIENCE:** BSEET or AA degree or equivalent experience with license or industry certificate in testing, aligning and troubleshooting state-of-the-art complex communications systems such as microwave, satellite or cellular systems. Equipment: Digital Multimeter, TI test set, Stabilock Radio test set, Wattmeter, Portable PC, Dual-mode telephone. Extensive travel.

**Contact:** Rick Kivus (214) 705-7682 FAX (214) 952-8777

**Ericsson Systems Expertise Ltd., Ireland**

### VERIFICATION/MODIFICATION HANDLING LEADER FOR CMS PRODUCT DEVELOPMENT TEAM

As a result of the new project organisation at EEI/R, applications are invited for the position of CMS verification leader.

Reporting to Michael Gallagher, you will be, together with the other members of the CMS product development team (PDT), jointly responsible for the operation of CMS development with special accountabilities for verification and modification handling activities.

Specific responsibilities will be:

- management of relationship with LMC integration and development of I and V activities as a business area for CMS PDT management and control of verification BTA's.
- resource planning and competence development of CMS test and modification handling teams.
- specification of test plant and tool equipment required for system verification and modification handling.
- CMS/CME modification handling.
- specification of verification methodology.
- management of improvement programmes (time-to-market, ESSI, etc).

- support to CMS project organisation.

- achieving company goals for TR/AC handling for CMS. Ideally the person will have 4/5 years of AXE experience with an in-depth knowledge of all aspects of system testing. As the position requires close liaison with all levels of staff/customers, the successful candidate will be an excellent communicator and have a proven record in the area of resource utilisation and staff motivation.

As a screening process based on applications received will take place, it may not be necessary to interview all applicants.

**Application** for the above post should be sent in writing, enclosing a detailed curriculum vitae to the undersigned.

Anne M.O'Sullivan, Personnel Officer  
Ericsson systems expertise Ltd.,  
Beech hill, Clonskeagh  
Dublin 4

# Find the fox and close the deal

## The art of sales according to Holden

**Technical opportunities within the data and telecommunications field are growing constantly. Product innovations and new applications compete for our attention each day. Customer demands and the need for guidance in certain areas are increasing in pace with the products offered in the market. To successfully sell all the new products and services being offered requires increasingly greater input.**

**In recent years, a number of methods and selling concepts have been launched. One of them is the Holden program, which is aimed at suppliers of telecommunications and information technology.**



Jim Holden has developed a sales technique aimed at suppliers of telecommunications and information technology.

Within Ericsson Business Networks, the Holden concept is being used to sharpen the company's ability to satisfy the wishes of its customers.

Within the F division (Business Communications) in particular, all of the company's own sales personnel in Sweden and abroad are being trained in the new concept.

Jonas Ek, who is responsible for international key accounts within the company, is responsible for ensuring that the Holden method is incorporated in the company's operations, for the training program and for the ongoing evaluation of the work.

### Customer needs

The Holden program takes a collective look at selling at all levels. It presents methods for increasing the efficiency of everything, from volume sales of more basic products to the customized sale of sophisticated, tailor-made communications solutions.

The concept has been specially developed in the U.S. for just those sectors in which Ericsson is active. Holden is regarded as a tool with which to access a customer's organization in a structured manner. Through a program of standardized questions, it is possible to build up in stages a very comprehensive knowledge of customers' operations, business goals and communication requirements.

With his knowledge of the Holden process, Ericsson sales personnel can make an analysis of their customers' individual needs and recommend the type of communications solutions that will improve efficiency and facilitate operations, while also showing the customer new business opportunities and ways of further increasing the effectiveness of his operations — perhaps to the extent that a customer could eventually change the direction of his business.

The Holden company corporate logo features a fox's head. The symbol has been deliberately chosen to reflect part of the concept. The salesman is encouraged by

Holden to conduct a fox hunt in the customer company selected for cultivation.

"Within most companies and organizations there are informal power centers, which exist right alongside the formal decision makers," says Jonas Ek. "Such centers can take the form of a single person, or a group, all of whom for various reasons are capable of exercising influence over important decisions. Yet, on the face of it, they do not hold positions of corresponding authority."

### The fox does the job

In Holden terminology, such persons are called "foxes." If you are lucky enough to



**Within most companies there is a person or a group, which can influence decisions. Such people are called foxes.**

Holden Corporations logotype.

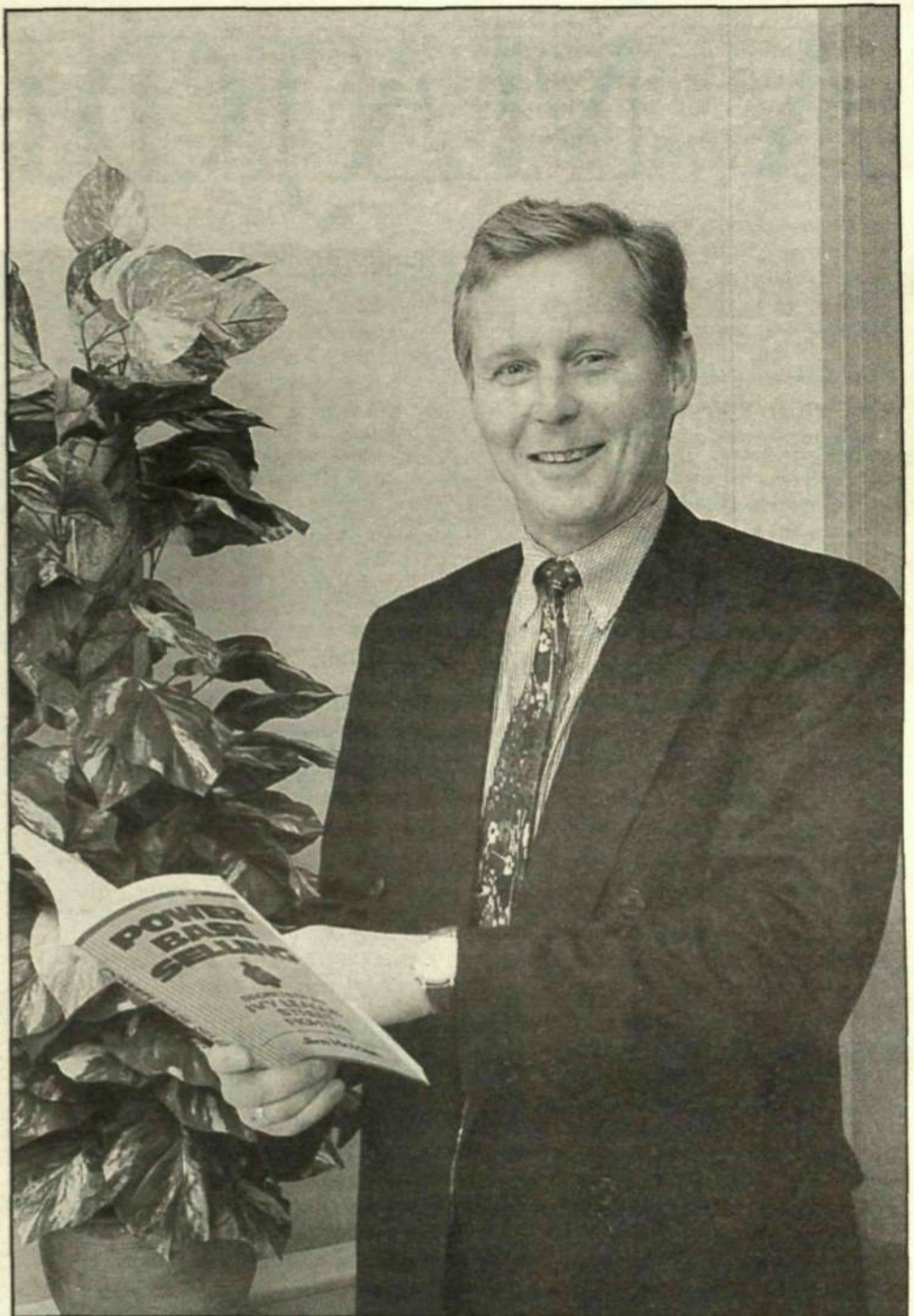
find and convince a "fox," your chances of clinching a deal are substantially increased. A large part of the sales job is then handled by the "fox," who is in a position to persuade members of his own organization that Ericsson's communications solutions are superior to those of its competitors.

### Increased revenues

Today, our own sales resources concentrate mainly on the selling of customized solutions, a segment where we already have a high degree of competence. Correctly utilized, the Holden method can make Ericsson even more successful.

Ericsson's Major Local Company in the U.K., is a large Ericsson unit, in which Business Networks has its own division. During 1992, the Holden method started to be tested in the U.K. market.

All Ericsson personnel having direct contact with customers received training



Jonas Ek with the "Holden bible" Land Power Base Selling in his hand.

Photo: Thord Andersson

in the Holden method and started to apply the concept in their sales strategy. Evaluations made of the concept in this pilot market indicate that Ericsson has the potential to increase its ability, with the help of the Holden concept.

tended by some 20 sales personnel from all over the world.

In addition to sales personnel, the method is taught to members of company management, product managers, marketing, logistics and service personnel.

It is also planned that the personnel departments be integrated into the work. The Holden concept contributes new factors and perceptions which can affect both competence-development programs for employees and personnel requirements.

"The Holden aspect must become an integral part of the competence profiles that we create," says Jonas Ek. "Competence profiles describe those qualities we seek in employees and also constitute a valuable tool in the employee-recruitment area."

### Transforming words into deeds

An optimistic "Holden champion" now takes another step forward in his work to make the new ideas flow and eventually permeate the entire organization.

It is essential to evaluate the implemented training programs on a continuous basis and to push for a situation where the method is used in practice and not allowed to end up in a desk drawer or stack of paperwork.

The implementational phase, of transforming words into deeds, is often critical. The term "implement" means "to carry out, or accomplish" and extends beyond the introduction phase. With a successful implementation, new methods and ways of thinking can, in turn, make a dynamic contribution to the development of more innovative thinking. Ultimately, this will result in continuous feedback, and the new methods will open the way to further progress.

Kari Malmström

### Affects many personnel

The Holden training course consists of several stages and focuses on a number of areas. The basic course, "the Power Base," is a three-day program which provides participants with the tools necessary to work with the Holden method. The most recent course has just been concluded and was at-

# A MAJOR BOOST FOR SWESITE

Assembled by hand—using traditional nuts and bolts despite the high-tech environment—it resembles a giant-format meccano piece. Follow step by step how the Swesite mast at the Ericsson Business Networks plant in Järfälla, just north of Stockholm, was assembled and erected on a freezing cold day in February.



With experienced hands, Bengt-Åke Nilsson and Björn Aronsson check the tightness of all the nuts on the mast before it takes to the air.



The Swesite mast is assembled and ready for erection. The mast consists of a number of 2-meter-long sections bolted together. Each section weighs 70 kg.



Going up! Despite the mast being 51 meters high, it weighs only approximately 1,500 kg.

Swesite can be placed in the most varied environments and are generally used as radio base stations. During the years ahead, an increasing number of Swesite units are expected to find their way into the expanding mobile telephony market, among others.

In this age of high technology, simple solutions are sometimes received with a certain degree of skepticism. Can a sheet metal container, equipped with legs and a tall mast really be described as epoch-making? Of course it can! The extremely flexible Swesite concept from Ericsson Business Networks AB is also patented and protected as a registered trademark and is wholly unique for its type.

Responsibility for the concept rests with a small group based at the Network Engineering division within Ericsson Business Networks in Sundbyberg, a Stockholm suburb. Here, the concept has been developed and fine tuned in close cooperation with Ericsson Radio Systems and the division's production unit in Järfälla. The same group now has to shoulder responsibility for marketing the Swesite concept within Ericsson and externally, as well as handling the sales and installation of new units.

"Our aim, right from the start, was to develop a complete and easily transportable unit that offered good value for money," says Jan-Åke Linder, head of Swesite operations. "During autumn 1991, development work started and we had a prototype ready by summer 1992. During the same year, several Swesite plants were sold to mobile network operator Comviq GSM AB, our first customer.

## Following the stream

Among other factors, the capacity of a mobile telephone network is dependent upon the density of

its radio base stations. If there are too many gaps between stations, coverage will be adversely affected. The flexibility offered by Swesite enables operators to meet temporary traffic peaks, which can occur as the result of a large event in a particular area. For example, France Telecom,

to another location. Yet another Swesite is permanently mounted directly over the Le Mans racing circuit. During competitions, the area is filled with people, many carrying mobile phones. Thanks to Swesite, it is possible to efficiently handle all of the thousands

In the foreground the station shelter containing all of the necessary technical equipment and the

which has purchased several Swesite units, has had a unit located in the Biarritz area for some time, to coincide with a recently concluded major conference. A team from Sundbyberg and Järfälla has just returned from the area after having dismantled and moved the station

of calls made on such days.

"Swesite's flexibility could also be exploited to alleviate seasonal traffic peaks in countries with a large tourist industry," says Jan-Åke Linder.

## More than 120 units sold

The launch of Swesite has focused primarily on the rapidly expanding mobile telephone network, both in Sweden and abroad. Conditions vary between different countries and markets, but one thing is sure; every mobile network operator is a potential Swesite customer.

Satisfied owners of Swesite units can be found in countries throughout the world. More than

120 plants have been sold to date, most of them through Ericsson Radio Systems. Comviq GSM AB in Sweden, France Telecom and Belgacom are among those customers serviced directly from the Swesite group in Sundbyberg. In addition, a number of units have reached the market as parts of various projects throughout the world. Hungary, Malaysia, Cyprus and Norway are examples of countries where Swesite plants are in full operation. Test plants are also installed in a number of countries, including Egypt, China, Brazil and Russia.

## Constant upward trend

"We are expecting 1995 to be a good year," forecasts Jan-Åke



2.5-ton foundation plate. The entire station can be assembled by three men in two days, ready for erection by crane. Photo: Thord Andersson

Linder. The trend has been constantly upward ever since the start in 1992, with orders from both new customers and from satisfied existing customers. Swesite has many potential markets – all we need to do is reach customer groups with our message and make the concept known."

## Finding right channels

"Our primary concern here in Sundbyberg is to use our internal marketing resources and channels to reach customers," says Jan-Åke. "The goal is, that each Ericsson company should be in a position to offer its customers the Swesite concept."

With a Swesite, the customer gets a lot for his money and is ne-

ver exposed to the risk that he is investing in an immovable solution. For about SEK 400,000, the customer is supplied with a complete radio station, tested, erected and ready to use – all in a very short space of time. Flexibility and the opportunity to continuously adapt capacity to meet demand is all part of the deal.

Swesite is a soundly anchored concept and appears obvious in its simplicity, when one has actually figured it all out. Ericsson came up with the idea first, which gives the company an invaluable lead over competitors in the battle for customers. Demand for mobile telephone is expected to increase steadily in the years ahead – and, as a result, so will demand for Swesite!



The exciting final seconds – when the mast is secured to its foundation. Ready for use!

## Complete and rapidly in place

The Swesite concept is based on three basic units: a shelter for the radio equipment, the foundation plate and the mast itself. This is a complete package solution, which can be placed virtually anywhere. In just two weeks from receipt of order, a unit can be delivered and ready for operation. The actual assembly can be carried out by three men in two days.

A Swesite is not exactly mobile but is moveable and highly flexible. It can be used as a temporary station and relocated to another position after use, or it can be installed as a permanent station with an estimated lifetime of at least 20 years.

"Ericsson has sold radio base stations for both internal and external assembly for a number of years. Customers have then had to resolve many logistical problems themselves before the plants can be placed in operation. Technicians are needed for the installation work and for providing the stations with masts, which when located externally also require protection from the elements. Moreover, a suitable foundation is also required, all of which are a drain on resources," says Jan-Åke Linder. The Swesite concept fulfills all these requirements in a package solution.

## Ready for operation

Swesite is delivered with the radio equipment already installed and tested. Before the unit leaves the plant in Sweden, it is already known that all the material is included and in working order.

"We can save a great deal of money within the Group by installing and testing that the equipment functions here, at home," underlines Jan-Åke Linder. "With a turnkey plant, we also reduce the need for installation and assembly resources in the receiving country, which significantly cuts our project costs. Furthermore, since the station is shipped from Sweden as a complete component, it can be placed in operation virtually upon delivery."

## Expansion opportunities

Swesite's shelter takes the form of a self-contained room, enabling the technician to enter and shut the door behind himself. Maintenance and service can thus be conducted without exposing any of the expensive equipment to the elements.

In addition to marketing Swesite as a holistic solution, further expansion opportunities are seen in selling the equipment contained in the shelter as a separate product. Often, customers already have a mast installed at their older stations and only need to supplement the unit with new radio equipment. Swesite's ability to become rapidly established and supply high-quality technology are factors which can make the concept a competitive alternative even for customers in this area.

Karl Malmström

# New management in public telecommunications

Effective March 1 this year, the Public Telecommunications Business Area will have a new management, to be known as the BX Management Team, and a new operations control group. A reference group is being formed, comprising managers from Ericsson companies worldwide that carry on extensive BX operations, to devise the best possible form of cooperation. The business area will comprise fewer and stronger business units, and global control of production will be introduced.

- Focus on fewer and more vigorous business units
- Global control of production

This is a brief summary of the changes announced in early February. Anders Igel, the new manager of the Public Telecommunications Business Area, personally received more than one thousand pages of views and suggestions for changes.

One of his first actions when he took up his new position was to send out a memo inviting Public Telecommunications Business Area employees worldwide to submit their comments.

#### Overwhelming response

"The response was overwhelming, and included many creative and constructive suggestions," relates Anders Igel. "It is simply a mine of useful proposals we can explore during the next few weeks."

Many of the suggestions are specific and will be handled at a later stage. Numerous suggestions included more general comments that all point in the same direction, indicating a high degree of unanimity regarding areas in need of development or strengthening.

The following are some of the suggestions received:

- A clearly defined operations management team able to take decisions rapidly in order to make BX a flexible and market-driven organization.
- Openness, providing feedback and involving employees in decisions were seen by many as important factors for better leadership.
- Clear and simple division of responsibility, for example by reducing the number of business units with purely commercial responsibilities. Also important are coordination of product offerings and focus on network competence.
- Concentration on core operations through more rigorous prioritization. Better control of efforts to secure a future market position.
- Better understanding of BX's business concept and long-term objectives.
- Far greater respect for delivery precision.
- Clarification of Ericsson Telecom's identity within BX.

- A will within Ericsson Telecom to achieve a sound TQM performance. The company seems to lag far behind many large companies within Ericsson with regard to acceptance of TQM.

- Increased cooperation between units and a more closely integrated management group for the business area.

#### All replied

Anders Igel was pleased with the volume of responses and promised that all those who sent in suggestions and comments would receive a reply in due course.

On March 1, when the new operations control comes into force and the new management group, BX Management Team, commences work, the top priority and common responsibility for the management group will be the business area's overall operations. In addition to Anders Igel, the following people will also be members of the management team:

**Ingemar Nilsson** will be in charge of the new Narrowband and Wideband Network Systems business unit.

**Björn Hemstad** will be responsible for the new Broadband Network Systems business unit.

**Rolf Nordström** will head BX Production Operations.

**Kaj Juul-Pedersen** will be in charge of BX Markets.

**Karl-Henrik Sundström** will be in charge of BX Business Control.

**Lars Wiklund** will be responsible for BX Human Resources.

#### Global reference group

BX Management Team will actively cooperate with a reference group consisting of 14 managers of companies with extensive BX operations. The group includes managers from the following companies: EDB (Brazil), EDD (Germany), EME (Spain), EPA (Australia), ETC (China), ETL (Great Britain), ETM (the Netherlands), ETO (Norway), EUS (U.S.), LMD (Denmark), LMF (Finland), MET (France), TEI (Italy) and TIM (Mexico).

#### Responsibilities to be clarified

The operations of the Public Telecommunications Business Area are highly international and are conducted by a large number of different Ericsson companies worldwide. One of these companies is Ericsson Telecom AB (ETX), which is the



BX Reference Group, the reference group for the Public Telecommunications Business

largest company in the business area. It occupies a key position and has many crucial areas of responsibility.

An equally large part of BX operations are conducted in other companies outside Sweden. The new operating structure for BX will involve making a clear distinction between responsibilities at BX level and ETX's responsibilities as one of the companies in the business area. This means that some employees will acquire a clear BX identity.

#### Vigorous new business units

The formation of two new business units, Business Unit Narrowband and Wideband Network Systems, and Business Unit Broadband Network Systems is aimed at simplifying and more effectively coordinating the business area's product offerings.

Each of the two units is oriented towards its most appropriate market segment. The two new business units have total commercial responsibility, meaning that they are financially and operationally responsible for all commercial activity in their respective product areas. Business Unit Narrowband and Wideband Network Systems comprises all operations based on AXE and other products for public wireline narrowband networks, such as intelligent networks, network management applications, access networks and customer services.

#### World leaders

"We can become world leaders in this segment," says Anders Igel confidently. "Although the normal approach at present is to contract out one part of the network at a time, we can gain a competitive advantage by showing that we are a market leader in

Area, and BX Management Team, the new management group, have already held their first meeting.

providing complete and efficient solutions for narrowband networks.

The operations of BU Broadband Network Systems cover the new wireline public broadband networks. They include all public broadband network operations, such as transport networks, network management applications, access networks and intelligent networks.

"Our objective is to gain a leading position in this segment too," emphasizes Igel, "and Björn Hemstad's main task at present is to strengthen control over development."

Given the rapid pace of developments in the public telecoms market, product development and marketing must be controlled in a closely integrated manner within the business units.

The unit currently designated Market Operations within ETX, and the corres-

ponding units in the local companies, will therefore play a crucially important role in the new business units.

"The business area's overall market position will be strengthened through better coordination within the business area of all interdependent product areas," asserts Igel.

#### Global control unit

The creation of the BX Production Operations unit resulted from the need for global control of production and production development. Cost-cutting measures must be implemented more straightforwardly and more rapidly. Delivery precision must improve. The assigning of responsibility for global control to BX Production Operations means the local companies will have increased influence on decision-making.

"Rolf Nordström's principal task will be to ensure that products are delivered on time, cut costs and reduce restricted equity to a minimum," says Igel.

#### BX functions

Three functions are represented in the management team.

A new function, BX Markets, will be established to handle strategically important commercial issues. BX Markets will have the ultimate responsibility for ensuring that we capitalize on present and future commercial opportunities that require special attention.

"We must tighten financial control and facilitate the tracing back of financial results to different operational levels," continues Igel.

"This will be one of the primary tasks for the BX Business Controls function."

"One of the clearest messages in all the feedback from employees at the various BX companies was that we need to create the conditions that will produce better operations management and more effective managers across the board," underscores Igel. "Responsibility for this area and for identifying potential managers will be one of the most important tasks handled by the BX Human Resources function."

#### Timetable

All members of the new BX Management Team are now working to shape operations within their respective areas of responsibility.

"The overall structure will be completed by March 1. Until then, the new units may be renamed or additional functions and core units created," concludes Anders Igel.

Cecilia Schön-Bostrom

Photo: Ulf Berglund



# CONTACT

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## EDACS helps the police in Seoul

**"With EDACS, we gained a communications system on which we can rely and the degree of coverage of our radio communications has increased 98 percent," relates Colonel Park Nae Won.**

**In his position as superintendent of Seoul's national police force, he is responsible for communications solutions in Seoul and the surrounding area, where more than 10 million people live.**

The police in Seoul cut-over the EDACS digital private radio system last year. Prior to this, Colonel Park and his colleagues had only a conventional radio system to use and there were not too satisfied with the reliability.

### Limited frequencies

"The availability of radio frequencies is extremely limited in Korea and our conventional system on the 150 Mhz band competed for space with many other

users. The most important factor for us is no interference in the transmission of radio traffic," Colonel Park says.

"Seoul is a very densely populated city, with many 'dead zones' where is previously was difficult to maintain radio coverage."

"We also need to be able to form separate talk groups which could communicate directly with one another or be part of a larger group or organization. Without the possibility of creating flexible regroupings, our work as police was much more difficult."

### Large area

Colonel Park listed a number of criteria that a new communications systems would have to fulfill before he would decide on which supplier to choose.

The system would be able to provide secure communications over large geographical areas. It would permit the users to quickly and easily select to speak with one another within separate groups or over the entire network.

The system would also have to meet unlimited possibilities for cooperation between groups and a command and control

center and it must meet very high requirements for reliability.

Ericsson's EDACS system met all the requirements set by Colonel Park for the Seoul police's new communications system.

The system includes more than 13,000 portable radio, which operate on 75 channels.

### Connected to MD110

The system has also been connected to Ericsson's MD110 subscriber exchange and the public tele network. In this way, you can call from the public network to each individual or each group in the Seoul police's network.

The EDACS system is also connected to the Ericsson Data Gateway (EDG). This is a high-speed processor, which links the EDACS network with private or public data networks. This gives every radio user in the EDACS network access to data transfer.

### GPS

Another application which the police in Seoul have linked to their new communications system is Automatic Vehicle

**The operator at the control center can locate and follow the police cars and any VIP escorts on the terminal display.**

Location (AVL). This means that data from a satellite-based GPS (Geographical Positioning System) is automatically transmitted via the portable radios to a control center, where the controller can locate the operator and follow the police cars and any VIP escorts on a map on a display terminal.

### Digital voice coding

One advanced function demand by the Korean police was digital voice coding. This means that the analog signal is converted to a digital signal which makes eavesdropping more difficult. Colonel Park relates that plans are already under way to expand the system to 100 channels.

### Additions

An additional 12,000 portable radios are to be delivered by the end of the year. There are plans to expand the system to other major cities in Korea.

With EDACS, the police force in Seoul has gained a system which make its job safer and more effective and indirectly increases the safety and security of the people who live in and around Seoul.