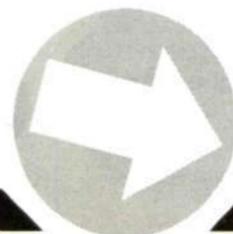


# contact



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NO. 4 · MARCH 25 1999



Many Ericsson employees are attracted to jobs abroad. Today, there are 3,300 employees within the company who are on foreign contracts, but this number could grow. Salesperson Lovisa Engwall found a job as product manager at Ericsson in the Netherlands using her own contacts, which gave her career a real boost. "You don't need to be a specialist in a specific area to be attractive to companies in other countries," she says.

Photo: Lars Åström/Världsbilden

## Lovisa took herself to the Netherlands

As an international company, Ericsson has an unusually high number of employees on foreign contracts. And in the future, even more employees with global experience will be needed. Lovisa Engwall organized a job for herself at Ericsson in the Netherlands. Through her work in sales, she had established contacts and in the Netherlands her knowledge of Ericsson and her network of contacts were seen as valuable assets.

"I can't imagine a better form of training than working abroad," says Lovisa.

8-9



Suitable license plate for a new demo bus

## WCDMA demo center in Stockholm

At a new WCDMA demo center in Stockholm, operators, authorities and the media have the opportunity to test the mobile phone services of the future. Activities which the user can try out include mobile video conferencing or wireless CD audio.

At the same time, Ericsson is launching a new WCDMA testing system in Stockholm in conjunction with Telia.

3

## Twelve pages of finance

The Economy supplement provides a simplified insight into the most important aspects of the Annual Report, including a layman's guide to the income statement and balance sheet. Read about Richard Minogue, whose job is to prevent fraud, and about Håkan Beckman, who will make Ericsson's internal invoicing electronic.

### NEWS

#### New player in Italy

The Italian operator Wind is one of the first in the world to build an integrated tele network for wireline and mobile communications. This will provide entirely new services in this competitive market.

6

#### Equality via the boss

The manager is the key to equality. By the same token, female managers are the most visible signs of equality efforts. Meet the female managers in Contact's series on equality.

14-15

#### One-man office

Fernando Avila-Urbe is Ericsson's only man in Nicaragua. Despite a somewhat bloody and disaster-afflicted past, there is now cautious optimism in Nicaragua.

12-13

#### Operators get extranet

An extranet solution is now being tested, whereby operators who are Ericsson customers can order products on-line. The service also includes product information for a substantial number of Ericsson products.

19

#### CEBIT

Ericsson launched several new phones at the CeBIT tradefair in Hanover, Germany. The jewel in the crown is the new WAP phone, the R 380s, using the EPOC operative system.

3

#### HELLO THERE!

Eija Nokia who, despite her last name, works for Ericsson.

5

## contact

The publication for Ericsson employees all over the world

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# First female president outside Sweden

Conni Simonsen is the first woman to be appointed President of an Ericsson company outside Sweden. Spearheading two management groups comprising three other women and ten men, Ms. Simonsen is determined to lead Ericsson in Denmark along the tough road into the next century. She will face difficult challenges now that expansion of traditional wired telephony in Denmark is virtually complete.

Ericsson in Denmark has enjoyed strong business growth during recent years. Today, however, the company faces what might be its greatest challenge – now that Denmark's wired telephone network has been totally digitized and AXE expansion has reached its limit.

"We are approaching a precipice. The time has come to find completely new ways to navigate," says Conni Simonsen.

She is the first woman to be appointed President of an Ericsson company outside Sweden and the first woman to manage a marketing unit in the new organization.

"My appointment as President of Ericsson in Denmark is proof-positive that new opportunities are now being created for women within Ericsson. It's good for the company, since we women have a great deal to offer in terms of personal qualities not always as prevalent among male colleagues.

### Teams instead of individuals

"I believe we are more generalist and have the ability to manage more things simultaneously. Sometimes, we also see different angles and aspects of things that men might miss and, for this reason, women in management represent a plus factor in combination with the men who have always been there."

Conni Simonsen is an advocate

### CONNIE SIMONSEN

Conni Simonsen, 43 years old, is a graduate engineer. She joined Ericsson in Denmark in 1985, after working a few years for local telecom operators in the country. Following initial assignments in various engineering departments, she was named marketing manager of four local operators, among other clients. She was later appointed manager of the company's customer support department.

In 1996, Ms. Simonsen was named manager of the Danish company's branch office in Lithuania, where she worked for two years developing the unit into a local Ericsson company. Conni Simonsen returned to Copenhagen in September 1998 as manager of systems development. In November, she was appointed President of Ericsson in Denmark.



Conni Simonsen is the first woman to be appointed President of an Ericsson company outside Sweden. "New opportunities are being created for women in Ericsson" she says.

of Sven-Christer Nilsson's management philosophy – whereby the company should be managed by carefully selected teams, instead of strong individuals. In addition to an Executive Management Team, she has established two management groups at Ericsson in Denmark, accordingly. One of the teams focuses on the company's business activities and market, Business Council, with the other concentrating on management and development of internal operations, Organizational Development Council.

The business management team includes Key Account Managers and business segment managers, in addition to Conni Simonsen. The team's main task is to generate new business with new and existing customers. The other management group, the team for organizational development, consists of management staff members of various central functions, such as personnel, finance and accounting, information and others. The business managers are excluded from this group, concentrating instead on sales, except when questions arise that may concern one of more of them who may be called for advice.

Work is now in progress to streamline decision-making processes and other routines that must be established quickly. Conni Simonsen attaches considerable importance to clear and effective decision-making channels, managed from the top, in combination with increased responsibility for all employees.

"I believe my greatest responsibility lies in ensuring that the Danish company's and Ericsson's strategies and objectives are known and understood throughout the company. This knowledge and understanding will make our employees more secure in the growing number of decisions they will make by themselves."

Ericsson in Denmark and the rest

of Ericsson share the same strategic pursuits: to achieve stronger long-term business growth than overall market growth in all three customer segments.

"In Denmark, we are striving to become the leader in ATM and IP-communications and a much bigger player in enterprise communications – with particularly strong emphasis on professional services. As part of our determined efforts, however, it's important that we embark only on business ventures that offer us profitability; we should not buy market shares through ill-advised business transactions."

### Dialogues with customers

Conni Simonsen emphasizes the importance of establishing dialogues with customers, discussing their future needs and explaining what Ericsson offers, or will soon offer, in IP-communications and other areas in which we are not as well-known.

"In Denmark, there is a strong feeling that customers are beginning to understand that we really have some interesting solutions in the pipeline. At the end of last year, for example, we organized a conference focused on IP-communications that made a very strong impression on participating customers. They were quite simply overwhelmed by what Ericsson has to offer. We shall have to work hard now to broaden the playing field and create greater scope for future business. And to win critical reference orders this year.

"We must learn that, sometimes, products have to be sold before they are completely developed; otherwise, we might never develop the right products."

Ericsson in Denmark had a record year in 1998. Conni Simonsen does not believe results this year will match last year's. It takes time to master new modes of navigation. It is important, therefore,

for all employees to realize the importance of using the company's resources wisely and to cut costs wherever possible.

"Branding and trademark development activities will not be restricted to external endeavors, however. We also face the imposing task of increasing awareness of Ericsson's trademark's significance among our own employees."

### Focus on skills

During the past few years Ericsson in Denmark has grown by 60 percent in number of employees. In 1997 273 people were employed and another 250 were recruited in 1998.

Integrating and acclimatizing such a large number of new employees has involved some very hard work. One lesson learned from recruitment in 1998, says Conni Simonsen, is that it's high-time to focus on the importance of our own internal skills and expertise.

"We have talked far too much about the importance of recruiting new skills. Now it's time to devote greater attention to the skills and expertise already available within the company. It's crucial that we retain and develop these assets, and guide them in the right direction. For this reason, we are now working to establish a broader system of incentive payments, linked strongly with skills development and performance. The ultimate objective, of course, is improved business growth and profitability for the company.

"If and when the day comes that we have to make maximum bonus payments, I will be the happiest person in the company. Because then I will know that business is booming for Ericsson in Denmark and every stoplight is green," concludes Conni Simonsen.

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# R 380s – all in one

**At the CeBIT trade fair in Hanover, Ericsson showed its first intelligent WAP phone, the R 380s. Using this phone, it is possible to retrieve information from the web, send e-mail and create a diary and address book.**

**The phone will be on the market by year-end 1999.**

It was size that dictated the restrictions when the R380s was created. Ericsson's first WAP-phone was to be a mobile phone equipped to send e-mail and to retrieve information from the Internet – and it was not to be a large and clumsy product, weighing down a jacket pocket.

"That was actually the first thing we decided – the size. It was not to be bigger than a GH 688. Then it was up to us to solve everything else, to fill the frame with the possibilities to communicate in all different ways and to organize one's life, without detracting from the size or the usefulness," says Märten Rignell at Ericsson in Lund.

## Two concepts

In principle, there are two concepts for this type of product. The shared concept represented by the MC 218, where a small mobile computer is used in combination with a small phone. That concept is for those who want a comfortable keyboard, but who also want to be able to leave their MC 218 at home and only carry their small phones in their shirt pockets.

The R 380s represents the second

concept – an all-in-one concept. Ericsson's competitors have already launched products with functions combined in one product.

"What we have learned from our competitors' products is that size means an enormous amount for products with this concept. If functions are to be combined, the product must be small and convenient to carry around," says Märten Rignell.

To use as much of the phone's size as possible, a flap solution has been developed. When the user opens the flap a display appears that is almost the size of the entire phone. The R 380s is a so-called pen-computer, with a touch sensitive screen for making entries in a diary, sending e-mail and SMS or accessing news on the web. When the flap is shut, the telephone looks like an ordinary phone, but with an extra large display. It is also important that all the applications harmonize. With the R 380s, it is possible, for example, to point at the address list, which pro-

duces a phone number or an e-mail address and then call or send an e-mail message directly.

"This is not mainly about what I can do with a product, but that I can do it in a truly simple way and without lots of clicking," says Fredrik Lönegård, also product manager.

To be able to decide what is really

user-friendly, several prototypes of our own and competitor products have been tested on many different people in several different markets. The research lab in Kista, Sweden, and the Software Application Laboratory at Ericsson in Manchester in England have tested the user interface.

"These types of products are very technology intensive, but the user should not have to think about that." The market for this type of product has not yet taken off. But Ericsson believes that this will happen at the beginning of next year.

## Useful applications

An important factor for the progress of these products, is the development of applications such as the ability to shop, book a table at a restaurant, buy cinema tickets, read news or obtain financial information. Ericsson Mobile Internet, Ericsson's WAP port that can be reached using the R 380s, is a solution to the need for applications. It provides free access to the web, as well as world news from CBS and Dow Jones.

But it is not the intention of Ericsson to become a contents provider. Ericsson's WAP port is mainly intended to provide possibilities for other content providers to develop WAP applications and thus reach the mobile consumer with their services.

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## IN BRIEF



## Cordless mini power package

➤ Ericsson is launching its new Mobile Companion, the MC 218, which is the world's first mobile computer to have both WAP functionality and the EPOC operative system.

The MC 218 is used in combination with an Ericsson mobile telephone. The user has the possibility to quickly and simply send e-mail, SMS messages, faxes or access the Internet. The small mobile computer is equipped with an eye for infrared light, which communicates with the user's Ericsson GSM phone. This means that no cables are needed.

"The MC 218 is particularly aimed at businesspeople who want the possibility to communicate using text and images, but who also occasionally want to leave it at home or in their jacket pockets and only take their really small phones, like the T 28," says product manager, Carl Johan Ivarsson, at Ericsson in Lund.

At the CeBIT trade fair, Ericsson also showed several other products. For example, Ericsson launched a small phone, T18, with voice dialing and answering.

☞ [http://www3.ericsson.se/SE/kon\\_con/contact/cebit99/index](http://www3.ericsson.se/SE/kon_con/contact/cebit99/index)

## IP network for voice and data

➤ Ericsson has signed a contract to supply a nationwide IP network for voice and data in Spain. The order is valued at SEK 90 million (USD 11 million). The customer is Interoute Telecomunicaciones in Spain, a subsidiary of the London-based European Telecom Group.

"As far as we know, this is the largest ever order for an IP telecom network," says Staffan Lindholm, head of IP services at the Datacom Networks and IP Solutions business unit.

## WDM technology for o.tel.o

➤ German operator o.tel.o has purchased Ericsson's optical transport technology, Wavelength Division Multiplexing (WDM).

o.tel.o will use the technology to strengthen its main network. Ericsson has been one of o.tel.o's suppliers since 1996. Telefonica, BT and Sonera are three other major operators who have also opted for Ericsson's WDM technology.

## TDMA expansion in the Ukraine

Ukraine's only TDMA operator, Digital Cellular Communications (DCC), has placed an expansion order with Ericsson for the country's TDMA network, the technology which was formerly known as D-AMPS. The order is worth SEK 250 million (USD 30 million).

This is the fourth expansion order that Ericsson has received from DCC over a two-year period.

# Future is now at new center

**Ericsson recently opened a new demonstration center outside Stockholm, to show off its new third generation mobile telephone system, WCDMA.**

**It provides operators, government officials and the media with an opportunity to test the wireless multimedia services of the future.**

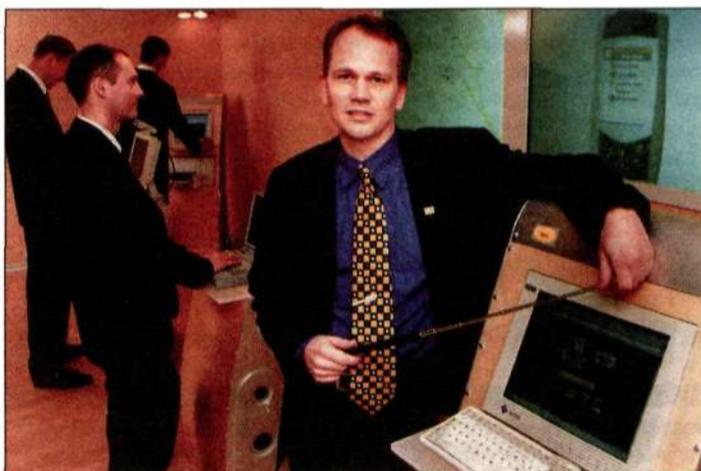
At the opening of the new demo center, Ericsson launched a WCDMA test system in Stockholm in conjunction with Telia. The demo center and test system consist of a total of five radio base stations for broadband transmissions.

## Visitors can try it

Visitors to the demo center can try their hand at using wireless Internet connections, videoconferencing, sending digital photos via e-mail or downloading music in real time. There is also a mobile testing bus.

"We want to provide visitors with the opportunity to both see and hear what kind of services a WCDMA system can offer," says Björn Norhammar, business development manager for the WCDMA radio network.

"Using web cameras connections



**Ericsson recently opened its new WCDMA demo center in Kista. The center provides operators, government officials and the media with an opportunity to test mobile telephone services of the future. Björn Norhammar, business development manager for WCDMA radio networks, is expecting to receive interested visitors daily.**

Photo: Peter Nordahl

visitors can, for example, retrieve information about traffic jams or parking spaces. At the same time, they are able to download video news clips or receive samples of different movies prior to ordering tickets."

Wireless videoconferencing operates at a rate of 64 kilobits per second. That provides a very good picture, thanks to Ericsson's own video coder, MPEG4. In the future,

video transmissions will reach speeds of 384 kilobits per second, while Internet access using packet data service will be able to handle 470 kilobits per second.

## Intensive work

Recent months have seen very intensive work to put the demo center in order.

"Now we are expanding the demo center further, keeping pace

with new functions as they are added to the system. We also linked our display at the CeBIT trade fair in Hanover with the demo bus in Kista, in order to demonstrate how mobile videoconferencing can be conducted using WCDMA," says Marika Hagberg, project manager for the Stockholm Test Network, which includes both the demo center and the technical evaluation network, of which Telia is a participant.

Ericsson has delivered WCDMA test systems to a number of operators in Italy, the U.K., Germany and Japan. All of these systems have first been tested and verified using the test system in Kista.

Standardization work is being conducted by the Wideband Radio Networks unit, which has complete responsibility for the WCDMA radio network. The unit is now also developing commercial products and dimensions for WCDMA networks for operators in Finland and the U.K., where third generation mobile telephone system licenses have been applied for.

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☞ <http://www.ericsson.se/go/wcdma>

# First hybrid node

**The huge BT deal, worth approximately SEK 3.5 billion, is both prestigious and challenging for Ericsson. Plans call for the development of a hybrid node, able to handle both voice and data traffic, the first of its kind in the world.**

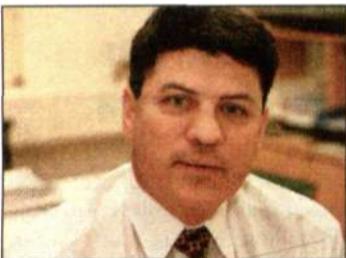
**Ericsson is also working under a very demanding time schedule.**

The new node will bring to reality what everyone in the industry is currently talking about: the convergence of voice and data, and of wireline and wireless traffic. This order is one of the most important that Ericsson has under-taken to date. The hybrid node contains complex technology, combining circuit-switched traffic with data traffic. In addition, Ericsson will be modernizing BT's transport network. Some forty transit stations will be replaced over a very short period of time.

## Big organizational demands

Stations within the BT transport network will be replaced with the latest version of AXE 10, using new hardware, new processors and the largest group selector available.

"This is a huge project," says Gunnar Forsgren, customer representative for BT at the Wireline Systems business unit. "But Ericsson is at its best when it comes to big challenges.



**The agreement with BT was preceded by a couple of years of preparation and discussion. Gunnar Forsgren is customer representative for BT at the Wireline Systems business unit.**

Photo: Lena Widegren



**"The hybrid node combines the circuit-switched voice traffic with data traffic," says Göran Lindmark, who is responsible for the Voice over ATM product unit within the Wireline Systems business unit.**

Photo: Lena Widegren

The order places great demands on our organization but we operate best when we are working under pressure."

BT's network is now nearing its limit, the result of the heavy volumes of information sent all over the world, at all hours of the day. The situation has been made worse by the rapidly increasing, capacity-intensive demands of data traffic. BT is also responsible for supplying capacity to competing operators. Using Ericsson's pioneering solution, it will be possible to dramatically increase network capacity.

## Common infrastructure

The hybrid node combines circuit-switched voice traffic with packet-switched data traffic. In practice this means integrating AXE's software platform with Ericsson's ATM exchange, the AXD 301. This solution creates a common infrastructure for both voice and data.

"The hybrid node provides the customer with a flexible network," says Göran Lindmark, manager for the Voice over ATM product unit within Wireline Systems. "It enables BT to choose whether to transport each call using the older circuit-switched network or through the new data network. It provides unique opportunities for our customers, including economic ones, which our competitors do not seem to be able to offer."

The agreement between BT and Ericsson has attracted a great deal of attention within the industry. It shows that Ericsson understands the convergence of voice and data in a way that no competitor has yet done. Many customers have made inquiries regarding the hybrid node, and Ericsson's strategy is proving attractive to many. It differs completely from many datacom companies who choose to build completely separate data networks.

"Traditional voice networks will continue to be in demand. As a result, we offer a flexible solution for migration," says Göran Lindmark.

## Cost savings

BT will also realize cost savings with the investment and will increase its business potential. For example, the operator will be able to offer multimedia services in the same network in which traditional voice calls are transported. The network will also become cheaper to operate using fewer, more modern, nodes.

"Over the long term, this network architecture can be developed into an IP network," says Gunnar Forsgren. "Using MPLS transport technology, IP and ATM can operate together."



**Ericsson has conducted business with BT since 1974. British BT is one of the world's largest operators with headquarters in central London.**

Photo: Lars Åström

IP technology is most suited to transporting data and is less suitable for voice communications. IP technology, however, continues to advance, and as soon as it reaches the level of quality required for perfect speech transmission, Ericsson will utilize IP.

Until then, Ericsson has chosen to use ATM technology for its solutions. The technology is able to transport data as well as voice across

data networks, meeting exacting quality demands.

"This job requires that we work outside the usual operational norms. We need to be in very close cooperation with the customer," says Gunnar Forsgren.

## Contact group

A fifteen person project group has been established, under the combined leadership of the business

unit, the market area and BT. Among other things, it will oversee the coordination of project resources, including the many different people from within various Ericsson areas. Several different companies are involved, including ones in Sweden, Finland, England and Denmark.

Lena Widegren

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## MINI GLOSSARY

**Transport network** – Transit network or backbone network. The core of the network infrastructure, which carries large traffic volumes.

**Transit node** – Switching station that carries traffic between larger regions and countries.

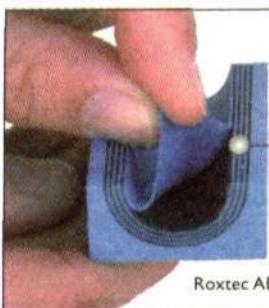
**Group selector** – Unit that is

responsible for connections within an exchange system. Organizes the flow of time slots to create connections between subscribers.

**ATM** – Asynchronous Transfer Mode, a broadband technology standard for voice, data, and video transmissions using a single format.

**IP** – Internet Protocol, supplies transport service of data information between host computers and routers and among routers.

**MPLS** – Multi Protocol Label Switching, a transport technology for IP which operates in conjunction with ATM.



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# New standard for NMT 450

**The European standardization body, Etsi, has begun work to produce a new NMT 450 standard. Both Ericsson and Nokia are part of the standardization group.**

Torbjörn Ståhl, who is NMT production manager at the GSM Systems business unit, believes that the equipment for GSM 450 will be delivered in 2001.

The new standard will have a coverage of at least 120 kilometers and

should be able to replace the analogue NMT 450 system, which is currently the best mobile phone system in rural areas. Since GSM is already established in a vast number of cities, it would also be possible to expand the network to rural areas using the new standard at costs which are not unreasonable.

The wide coverage of the GSM 450 means that it does not need as many base stations as the GSM 900. All the services currently offered by GSM will also be available from GSM 450,

such as the packet data network GPRS and Internet services.

It should be possible to use a future multiband GSM telephone for GSM 900 and 1800 in towns and cities and GSM 450 in the countryside.

There are other standards that are competing with GSM for the 450 band.

The Swedish mobile telephone company Radiodesign has developed its own digital standard called D-NMT and the American compa-

ny Qualcomm is developing a third standard. Etsi will make its decision in the year 2000 at the earliest. In addition to Ericsson, Nokia, Siemens and Alcatel, other supporters of the GSM 450 proposal include the Finnish company Sonera.

"We have set up a project office for GSM 450 and will soon be in a position to present a timetable and a product plan," says Torbjörn Ståhl.

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## Open interface for household networks

**Ericsson is leading a new industrial consortium to specify a new, open standard for Internet-based services for household networks. In doing so, Ericsson is adopting a strong position in the battle for this new multi-billion dollar market.**

The Open Service Gateway Initiative (OSGI) alliance will work towards creating open interfaces between data networks and intelligent household equipment. Fifteen major companies from the datacom and telecom industries are involved in the alliance.

### Conjunction with others

Ericsson is leading the work in conjunction with Alcatel, Cable & Wireless, Electricité de France, Enron, IBM, Lucent, Motorola, NCI, Nortel, Oracle, Philips, Sun Microsystems, Sybase and Toshiba.

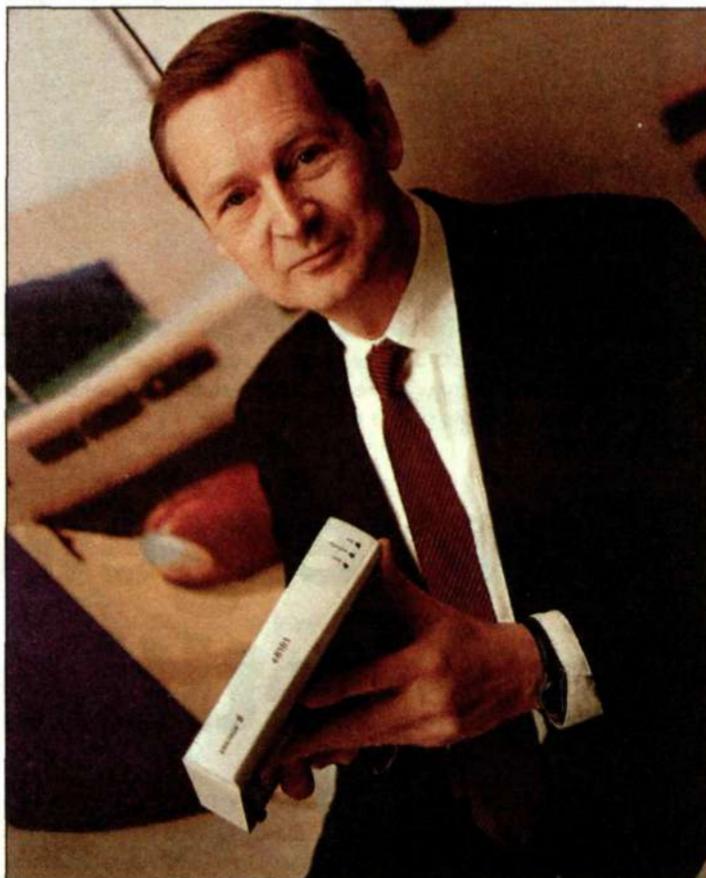
The consortium, which is open to all interested parties, has plans to establish an open, standardized net-

work architecture, based on Java technology, for the home market. By installing so-called thin servers into every household, it will become possible for different service providers to offer services such as high speed Internet connections, intelligent TV services, home automation, remote controlling and monitoring.

### Establishing a standard

"The goal of the alliance is to establish a dominant standard for household communications, making it easier for the industry to develop new applications. That's why it's important to get all of the players in the industry involved in this work," explains Jöran Hoff, manager of the New Business Operations business unit within the Network Operators segment.

The product unit for Ericsson's recently launched e-box system is part of this business unit. The e-box system will be adapted to the standardized interface and is an important part of the proposed architec-



ture for new household networks. The goal of the consortium is to achieve an industry standard by the middle of 1999.

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<http://www.osgi.org>

<http://www.ericsson.se/ebox>

**Malte Lilliestråle is the person behind the basic idea for Ericsson's e-box, which was recently launched. With such a large market resulting from the new alliance, its business prospects are expected to be even better.**

Photo: Nils Sundström

## Flextronics takes over installation

**Flextronics is acquiring Ericsson's installation units in Järfälla and Gothenburg in Sweden, according to a letter of intent signed with Ericsson Business Networks and Ericsson Sverige.**

The installation units are currently part of the Dedicated Networks production unit within the Consulting Services business unit.

All of the 60 or so Ericsson employees affected by the deal will be offered new jobs at Flextronics.

These include people who have advanced skills both within the installation field and the field of antennas and network construction.

"Our plan to outsource installation operations is in keeping with

our strategy to concentrate on our core operations," says Per Berg, Dedicated Networks manager.

In addition to the work they do for Ericsson, the affected employees currently also provide services to the Swedish Defense Material Administration, Europolitan, Volvo, Telia and a number of municipalities and county councils.

"We are now adding new resources to Flextronics," says Ronney Nilsson, president of Flextronics International Sweden. "This collaboration complements our offerings of complete solutions for customers, and we will now be able to offer our services to customers in a larger number of segments."

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## Popular job fair for WCDMA systems

**"Welcome to the future" read the sign at the job fair organized by the WCDMA systems business unit on February 25 in Stockholm, Sweden. As many as 150 people accepted the invitation to attend and find out about vacant positions and learn more about the third generation system.**

"We were satisfied with the attention the job fair received, even if the ongoing bus strike certainly kept a few from reaching Marievik, where it was held," says Ola Andersson, who works in the personnel unit for WCDMA systems and, along with Anna Lindvall, was responsible for the event.

"We need to recruit a large number of people this year, primarily engineers; many of them internally."

About 50 managers were in attendance during the job fair, in order to answer questions about different services. For those who wanted to learn more about the third generation systems, there were both lectures as well as demonstrations available.

"After briefly reviewing all of the applications we received, we have about 50 which we are very interested in and will be looking at more closely," says Ola Andersson.

This was the third job fair that WCDMA systems has arranged. Another one will be held again this autumn.

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## HELLO THERE



## Eija Nokia

**Eija Nokia, a recruiter at Energy Systems within the Ericsson Components Group, has worked at Ericsson since 1991.**

**Several times a day, she receives comments about her name. The unit where she works, Energy Systems, has Nokia and other Ericsson competitors, as customers.**

► Do many people think you are joking?

"Yes, a few wonder if that's really my name. For example, it can be difficult to order a taxi. The operator usually asks if that's the right name."

► Where does the name come from?

"It was my great grandfather's grandfather who came from the village of Nokia outside Tampere in Finland. Today, it has grown into a small town. When he moved to Turku, he was called Nokia's boy. Later, he adopted the name Nokia."

"It is the same town where the Nokia telephone company was founded. It began operations as a small paper mill and has subsequently developed into what it is today."

► Are there many people called Nokia?

"No, as far as I know, it's only our family, and there aren't that many people. We keep pretty close track of each other. I don't believe that there are any others who work either at Nokia or Ericsson."

► Have you grown tired of all the comments surrounding your name, now that you work at Ericsson?

"Of course you get tired of it, but its one of those things you just have to put up with, and it isn't entirely negative. It can be an advantage when you meet new people and are making contact. Since I work in recruitment, I meet many people every day whom I have not met before. They often comment on my name."

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## INDUSTRY NEWS



Sigrun Hjelmquist, president of Ericsson Components, is third in the top echelon of the business community.

Photo: Anders Anjou

## IT women most powerful

► Sara Kullgren is the head of Nokia Mobile Phones in Scandinavia. She is ranked by Swedish business magazine *Veckans Affärer* as one of the most powerful women in the business community.

Sigrun Hjelmquist, president of Ericsson Components, ranks third. Four percent of management positions in the 500 most important companies in Sweden are held by women. Twenty of the 60 most important women are with IT companies.

## Siemens on a spree

► Siemens is now taking after many its competitors and acquiring small specialized Internet companies. U.S. companies Argon Networks and Castle Networks were recently taken over by Siemens. Both are located in Massachusetts on the American east coast.

Siemens is also planning to purchase a share of the Californian Internet operator Accelerated Networks.

## Lucent and BT join forces

► In the Asia Pacific region, U.S. company Lucent and the U.K.'s BT are forming an alliance to jointly take on the call-center market in the region.

## Cisco swells in Silicon Valley

► In Silicon Valley, California, USA, the Cisco company is swelling to double its current size. The company recently purchased land outside San Jose, to allow it to expand to 20,000 employees.

Founded in 1984, Cisco currently has net sales of slightly more than USD 10 billion. The company now has about 10,000 employees and is worth an estimated USD 150 billion.

## Even more Swedes surfing

► Sweden's use of the World Wide Web rose by 7.6 percent between January and February, according to a study by Sifo Interactive Media focusing on Swedes between 12 and 79 years of age. Compared with December, the level increased by 12 percent.

In total, 46.9 percent of Swedes surfed last month. The largest increase was among women between 50 and 79 and men between 35 and 49. Younger surfers are still in the lead, but the growth rate is considerably higher among older people.



In Italy, the largest GSM country in Europe, the telecom market is growing quickly. Ericsson is currently helping Italian telco Wind to build an integrated network for wireline and mobile communications. Recently, Wind mounted a major campaign to advertise its new network, and is clearly visible from the streets of Rome.

Photo: Nils Sundström

# Convergence creates competition in Italy

**Fixed and mobile telephone networks are growing together using new technology. The Italian company Wind is one of the first operators that, from the very beginning, has constructed an integrated system for various communications needs. This offers the customer completely new services.**

Convergence has long been a buzzword in the telecom market. The closer interworking between fixed and mobile telecommunications – fixed mobile convergence – includes everything from new services to the integration of nodes, networks and operating systems.

For example, the user can have the same voice mailbox for fixed and mobile telephony, while the operator can also use the technology of large sections of the network in a coordinated manner for various forms of access.

Wind is a newcomer as an operator in the competitive Italian market, with a business strategy completely based on fixed mobile convergence – as well as convergence between voice and data. And Ericsson is the company's most important partner in these efforts.

### First in Europe

"Convergence is a new frontier in communications. We are the first in Europe to offer products based on fixed and mobile telephony," says Tommaso Pompei, CEO of Wind.

The company began its fixed network in December and, on

March 1, launched a GSM network for the 900 and 1800 bands in Italy. As Wind's main supplier, Ericsson has supplied a ready-to-use systems solution and has, in only nine months, also developed a common platform for intelligent network solutions.

"The platform means that we are able to offer the customers full convergence services from day one. They can, for example, receive a single invoice regardless of whether it is for fixed or mobile telephony or Internet traffic," says Tommaso Pompei.

### Prepaid phone cards

Wind also offers prepaid telephone cards for both fixed and mobile telephony, as well as intelligent switch services. This successful strategy is based on continuous technical innovation – and offering customer-oriented solutions at competitive prices.

"There is now a rapid evolution between IP traffic and fixed and mobile telephony. Wind is the first concrete example of fixed mobile convergence on a large scale. Hopefully, it will also inspire other operators," says Massimo Gentili, who is responsible for the Mobile Systems Division at Ericsson in Italy.

The telecom market in Italy is experiencing strong growth. With around 17 million GSM subscribers, Italy is the world's largest GSM land after China. Today, thirty percent of the Italian population have a mobile phone and that number is increasing rapidly as a result of prepaid subscriptions. It is

### FACTS ABOUT WIND

Wind was established in 1997 and 51 percent of the company is owned by the Italian electrical company ENEL. The remainder is owned by Deutsche Telekom and France Télécom. Wind is the third mobile operator in Italy and one of thirty companies holding a license for fixed telephony within the country. The newly acquired Internet second



Tommaso Pompei

largest supplier of Internet access for the companies' market, also makes Wind a formidable player also in Internet services in Italy. Tommaso Pompei is responsible for operations at the operator Wind, which is now shaking up the Italian telecoms market. He was previously president of Omnitel – Italy's second largest mobile operator after Telecom Italia Mobile.

expected that virtually every second Italian will have a mobile phone by next year.

"We mainly target the consumer market. At the end of 1999, we estimate that we will have 700,000 mobile subscribers and one million fixed telephony subscribers," says Tommaso Pompei.

Wind's target is to hold 20 percent of Italy's mobile telecom market and 14 percent within fixed telephony by the year 2003.

### Strong partner crucial

Pompei emphasizes that having a strong technical partner like Ericsson is absolutely crucial for Wind's success.

"With the support of Ericsson, we are able to offer attractive, network-based services. We will also be able to create completely new services using a combination of new terminals and a closer integration of networks and the IN platform."

However, Wind's investment plans are not only limited to fixed and mobile telephony.

Wind recently acquired the Internet company ITnet, Italy's second largest Internet services supplier in the companies market. This makes Wind a strong player also in the data communications arena.

"We reckon on being able to offer voice using the IP network during the next year," says Tommaso Pompei.

"Moreover," he adds, "We are also likely to be one of the first operators to install packaged data in the GSM network with GPRS. We are also closely monitoring the development of the third generation of mobile telephony, UMTS, and will definitely be making a bid when the licenses are issued."

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# A safe Swedish Tiger

Ericsson has been joined by another Swedish mobile producer. The Sectra company, based in Linköping, Sweden, is developing the Swedish "Tiger," the world's first wiretap-proof mobile phone. With its built-in encryption function the phone meets strict requirements set by the Swedish Defense.

Advanced systems for medical imaging, digital radio and wiretap-proof communications are currently being developed at Sectra in Linköping, Sweden. Founded in 1978, the company has its roots in the Linköping Institute of Technology.

Its most important project is the development of encryption equipment for data and telecommunications. Its largest customer is the Swedish National Defense, which purchases most of its encryption equipment from Sectra. The latest in the line of orders is the Tiger, the world's first wiretap-proof mobile phone.

## Expensive – but a good deal

With a potential retail ticket price of more than SEK 30,000 per phone, the Tiger is expensive – but for the customer, it is still a good deal. The ability of this phone to encrypt voice and data communications via the existing GSM network saves the Swedish Defense from having to invest in a proprietary wiretap-proof network.

"The Tiger was commissioned by the Swedish General Defense, but we expect to acquire other customers eventually," explains project manager Tommy Waszkiewicz. "Security is increasingly important for companies anxious to protect business secrets. Wiretap-proof communication is a concern of the times."

The encryption function of the Tiger is based on an encryption chip used in several

The antenna on the Swedish mobile phone "Tiger" points down. Sectra, the company that developed the phone, cites health reasons and better reception as reasons for the unusual design.

Sectra products. Both the dialing and the receiving phones must have the same key for the encryption to work. For calls to ordinary mobile phones and wireline phones, the encryption function is turned off.

Outside the range of the GSM network – on ships and in bunkers – the Tiger switches to the DECT standard. This function is a requirement of the customer, to make it possible to use the telephone anywhere.

When Sectra received the order for the Tiger in autumn 1996, GSM was unfamiliar technical territory for the company's engineers. A period of intensive study, to obtain the necessary knowledge, ensued.

"The development of a proprietary GSM radio was the real challenge of the project," Tommy Waszkiewicz explains. "The GSM threshold really must not be underestimated. Ericsson and Nokia have worked with

the technology for many years. We had less than two years to do this."

## Nothing to invest in

"For Ericsson, an encryption telephone of the Tiger type is not worth investing in. The market is too small," says Jan Ahrenbring Vice President of marketing and corporate communications at Ericsson Mobile Communications.

"Ordinary GSM phones are already encrypted to a certain extent. Encryption is included in the specification for GSM networks. Telephones with further encryption are primarily a product for a narrow defense-oriented market."

Niclas Henningsson

 www.sectra.se



## COLUMN



Sirpa Ikola

# Crisis in Japan may be beneficial in the long run

Nearly all economists are deeply pessimistic about Japan. There is speculation about whether the Japanese are somehow incapable of solving the crisis. However, even a problem-ridden Japan is just what global companies are looking for today. The country has a highly educated and industrious workforce, tremendous purchasing potential and political stability.

The acute crisis seems to provide unprecedented opportunities for foreign companies. It is forcing deregulation and a breaking down of both the corporate conglomerates and the government bureaucracies. Today, it is striking how willing Japanese leaders in government and businesses are to deal with foreign companies. Or maybe they are desperate.

Only a year ago it was unthinkable that Japan's Central Bank would hire McKinsey to help reorganize its operations. Thus, foreign companies located in Japan will be in the ground floor of the massive investment necessary to satisfy the nations pent-up demand for financial services, state-of-the-art telecommunications technology and modern housing.

## Weak blue-chip companies

Japanese blue-chip companies are not feeling very well. The apparent benefits of keiretsu type of business have turned to be one of their biggest drawbacks. Keiretsu is the name given to the special Japanese conglomerates often backed by a bank. In the fast moving global markets of the 1990's, it has turned out to be a handicap to be so deeply conservative. Flagships like Toshiba, Mitsubishi Electric and NEC will be lucky to break even in the current fiscal year. Some producers, including Hitachi, already are confronting longstanding structural bottlenecks – bureaucratic management, bloated workforces, overcapacity and far too many businesses. A thorough overhaul at Hitachi, which accounts for 2 percent of GDP, could be a model for the rest of the blue-chip companies in Japan.

Hitachi's new President, Mr. Shoyama, will shake up the company in order to improve profitability. He is expected to spin off excess operations within each division. As of today, Hitachi is a very overstretched company, ranging from Hitachi Metal to Data Systems to Nuclear Power Plants. Keeping all of these businesses alive could be a fatal drag on its high-tech aspirations. Hitachi has great technology and manufacturing capability, but if it continues to make heavy electric machinery the future isn't very bright. Hitachi's experience as a mainframe maker could be used to provide information systems for large enterprises and offer services in such areas as e-commerce, setting up networks and running data centers.

## Services in other sectors

To turn Hitachi around, Mr. Shoyama must establish a corporate mentality that values aggressive diversification and the pursuit of market share at the expense of profit. He will also have to do without the government contracts, cheap capital and keiretsu-generated business upon which electronics makers long depended.

A fundamental shift in thinking is necessary in order for the Japanese high-tech companies to survive. If Hitachi can successfully transform itself, it could light the way for the other ailing Japanese giants.

But the Japanese markets are not for the fainthearted. Cultural barriers remain high and more economic shocks could be on the way. However, Japan should still be considered as the world's most promising emerging market. And yes, the crisis presents an opportunity for Japan to flourish.

Sirpa Ikola works with Business Intelligence at Ericsson. She specializes in Asia. You can find more Worldwatch information on the web at:

 <http://bic.ericsson.se>

# Alcatel axes 12,000 jobs

During the next two years, French telecom giant Alcatel will phase out 12,000 jobs, that is, one in every ten employees. Most of the job cuts will be implemented in the U.S.

The cutbacks are expected to save the company USD 327 million per year, but still Al-

catel will not achieve its goal of an 8-percent profit this year. This is according to a statement made by Alcatel's board chairman Serge Tchuruk in conjunction with the presentation of the annual report last week.

Parallel to Alcatel's downsizing and re-

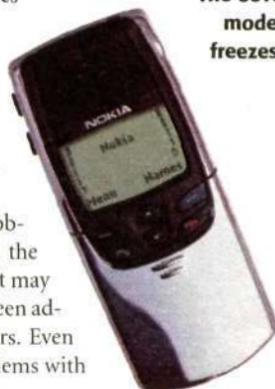
structuring, the company is investing heavily to become one of the leading players in the new telecom world. Alcatel recently acquired the Xylan datacom company for USD 2 billion, strengthening its position in terms of technological development for voice-data convergence.

## Quality problems for Nokia

► Sixteen percent of Nokia's mobile phones may have quality problems.

The problems have affected several models. Nokia manufactured 40 million telephones last year. Nokia claims that with such volume it is unavoidable that problems will occur in some products.

The best-selling models have had problems with the display. Nokia identified the source of the problem last autumn, but it may still be lurking in phones that have not been adjusted and are still available from dealers. Even the luxurious 8810 model has had problems with poor reception and jamming up.



The 8810 model freezes.

## Distinct share types merge

► Like Ericsson, Nokia has two share series, series A shares and series K shares. The K series shares carry ten voting rights each while the A shares carry one. The board of directors is now planning to introduce a single share type, which has irritated some shareholders who want to be compensated for switching to the less influential Class A shares.

The motivation for merging the share types is to facilitate trading. American shareholders are said to be unwilling to invest in companies with uneven distribution of power between share classes.

A third reason, which Nokia does not advertise, is to hinder an external player from quickly taking power by discreetly buying Class K shares. A competitor, for example, could buy 10 percent of the voting rights and then demand a position on the board of directors.

# Overseas work – a rewarding challenge

Many people are attracted by overseas jobs. But in order to find work overseas with Ericsson, outside of a contract offer, one needs to be very goal-oriented and self-motivated. That is what Lovisa Engwall discovered when she arranged a job by herself with Ericsson in the Netherlands.



Pack your bags and head for your destination of choice. Working abroad is both demanding and exciting – moreover, you will become more sought after in the labor market.

Photo: Lars Pehrson/Scanpix

A desire and motivation to work in another country inspired Lovisa Engwall to seek employment using her own contacts and references. Now, after two years at Ericsson in Rijen in the southern part of the Netherlands, she has mastered a new language and gained experiences which will undoubtedly boost her career back home.



Lovisa Engwall

Without her stubborn determination, however, Lovisa Engwall does not believe that she would ever have made it abroad. A great deal of energy and assertiveness is required to get there.

### Heavy burden to bear alone

The practical aspects of moving and changing workplaces was a heavy burden to bear all by herself. Lovisa Engwall finds it strange that more support is not forthcoming from Ericsson's corporate function for overseas contracts.

"They have the experience and could provide suggestions and advice. I'm disappointed that there is no help to be found there. Only those employees who have been offered overseas contracts are provided access to such services. It should be easier for more people to obtain international experience."

Lovisa Engwall has worked at Ericsson

for twelve years. During that time, she has held many different positions, but has always been based in the Stockholm area. Ever since she was a teenager, she has had a dream of being able to work overseas and explore a new part of the world. Two years ago, she decided to explore the opportunities that were available to her.

### Acquired contacts

In her job as a sales representative at Ericsson Sweden, a marketing unit within what was formerly Public Networks, she had acquired a number of contacts in the Netherlands and Switzerland.

The company in Rijen, in the southern Netherlands, expressed a great deal of interest in Lovisa Engwall's customer and product skills. They also viewed her knowledge of Ericsson and her contacts in Sweden as a valuable asset. She was offered a local position for a year. Her husband also received a job at Ericsson in the Netherlands and, following a one-year trial period, they decided to stay another year.

"It has been informative to gain other perspectives on Ericsson. The local companies have their own corporate cultures and work very closely with their customers. But it was also tiring to have to negotiate a salary, what should be included in the employment contract and, of course, having to arrange housing in a foreign country.

"But I do recommend others to utilize their contacts at other companies. Over-

seas experience is a fabulous thing for one's career. I am a more desirable employee to the company today. I wouldn't have received my new position as customer representative for AT&T Unisource with business contacts in both Sweden and the Netherlands, without the time I spent in Rijen."

It is Lovisa Engwall's impression that it is mostly managers, engineers and testers who are offered overseas contracts. Employees who don't fall within those occupational categories have to be satisfied with working on the home front or they have to struggle to get an overseas position. It should, however, be in the company's interest to get people with other skills to work abroad, especially since many believe that Ericsson needs to recruit more people with liberal arts backgrounds in the future.

### No better education

"We employees are encouraged to take responsibility for our own skills development and to make sure that we are attractive to employees. I can't envision a better education than overseas employment," says Lovisa Engwall.

"If it's too difficult to find a position in a company in another country, then I believe there's a great risk that many competent Ericsson employees will be scared away. And that's too bad."

Lena Widegren

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Old memories – new country.



Enjoy and explore.



Take new experiences home.

## "Don't give up after the first year"

Lovisa Engwall and her husband have been back home in Stockholm for a few weeks after spending two years in the Netherlands. If she only had her own situation to consider, she would have definitely stayed a third year.

"It was first in the second year that we were able to enjoy our surroundings down there. We had friends to socialize with and were able to plan our leisure time. I started taking dancing lessons, my husband joined the local rowing club. We really gained insights into everyday Dutch life."

### Speaks the language fluently

Lovisa Engwall now speaks Dutch fluently. Two years ago she couldn't speak a word.

"At work, everyone spoke English. But it wasn't quite as simple during our free time. The town of Rijen and neighboring Breda are relatively small and it couldn't be taken

for granted that everyone understood English. There are great similarities between Swedish and Dutch. After only a half year, I had picked up quite a few words which I inserted into my English phrases whenever possible. After a year and a half, I was able to speak entirely in Dutch. Now I have access to a third language which is great."

Lovisa Engwall's advice to others who are planning to work overseas is to not give up after the first year. It is common that people become tired of their complicated existence and return home again. In fact, it takes time to settle in. Those who hold on a little longer will be rewarded for their initial labor.

If you are considering an overseas job but do not have a contract offer waiting, you should take stock of your contacts within the company. That is what Lovisa Engwall did.

### Use your contacts

"If you really want to go overseas, you can't just read the vacancies listings. Utilize all the contacts you have here at home and at companies around the world. Friends will be able to refer you to the people who could be of assistance to you. My experience is that one's own skills are more highly valued than many believe. You don't need to be a specialist within a certain field in order to be a desirable employee for companies in other countries."

Lena Widegren

### CAN'T HELP EVERYONE

"We gladly answer questions regarding moving overseas, to the extent that we have time," says Ulf Grufman at Ericsson's corporate function for overseas contracts. "But we can't make it the rule."

"Our primary task is to support employees who have been selected by the company to go on extended assignments. We hardly have time to do anything else," says Ulf Grufman.

The 15 employees at the overseas contracts function

take care of between 1,000 and 1,200 employees each year. The number of people departing on overseas contracts has increased significantly over the past year. Currently, there are 3,300 employees working in foreign

countries. Of those, 1,800 are Swedes. Only the Shell oil corporation has more employees working on overseas contracts



Ulf Grufman

than Ericsson does.

Ulf Grufman and his colleagues provide global support to employees including all of the practicalities surrounding a contract position. These include acquiring visas, setting salaries, moving details, housing, questions about schools and much more.

"My advice is to contact

colleagues who work in the country in question and put questions directly to them. Embassies, tourism councils and consulates are also good sources," says Ulf Grufman.

"Of course, we are able to provide answers to questions," he continues.

"But don't take that for granted. At the moment, we are deciding which overseas services can be delegated to the various regions following the reorganization."

# Globalization involves more demands

In the future, Ericsson will require more employees who have global experience. Stockholm is no longer the only center of Ericsson's operations. The company has corporate offices in several areas of the world and is becoming more and more global in its operations.

This development has placed increased demands on personnel departments and managers who are responsible for the recruitment of new employees.

"I believe that in the future we will see a growing number of employees who want to work in other countries," says Per-Olof Nyquist of the Human Resources corporate function. Since the beginning of January, he has been responsible for the new Competence and Talent Management unit, whose task it is to improve Ericsson's ability to recruit, develop and retain employees with strong potential.

"Everyone who works in recruiting needs to become even more professional in how they handle various types of applications. This is true of both internal and external applications."

### Encourage overseas work

"The experience gained from overseas work is valued highly when we recruit employees. Seeking overseas employment using one's own contacts should be encouraged. This is true of all work areas. The example that Lovisa Engwall has set is good, in my opinion," says Per-Olof Nyquist. "We would like to have people who take the initiative themselves. But we need to make improvements when it comes to taking advantage of these initiatives."

An important task for the new corporate unit is to get Ericsson to work more actively to locate and recruit good people. Per-Olof Nyquist is responsible for developing a completely new recruitment policy.

"For example, we will no longer base our recruitment solely on filling vacancies. We need to have a common understanding as to how we go about recruitment. Everyone needs to keep in mind that we are recruiting people to Ericsson, the corporation, not just to a specific local company."

Until now, Ericsson has been successful in recruiting talented employees. But the competition for well-educated people will become more intense. In order to avoid being outrun in the rapidly changing telecom industry, Ericsson needs to become better at utilizing its own talents.

"From every study that we have participated in, it is clear that young, well-educated people want to work on challenging assignments, which help them to develop. But we also need to ensure that we hire the right kind of people who have the necessary skills for the future."

### Global trainee program

Per-Olof Nyquist is currently working on developing a large global trainee program. It will be open to young, newly recruited employees as well as internal talent. The training will encompass the best preparation conceivable for a wide-ranging career within Ericsson. In other words, its primary purpose is not to train new managers.

Ericsson will also strengthen its long-term relationships with universities and colleges throughout the world. This is a collaboration with a selection of the most renowned schools. This will enable Ericsson to be present across a broad front, helping it to find the best students.

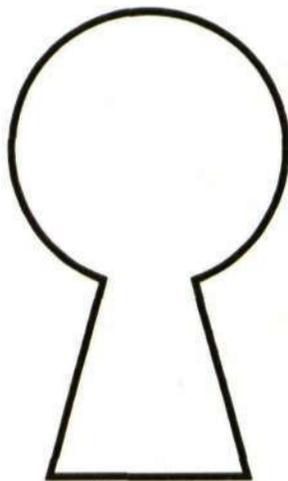
What is the definition of the best student?

"There is no exact profile. They do have one thing in common: they are unique in some way. Educational demands within the industry will continue to increase. But education alone is no free pass for employment at Ericsson. We are seeking people whose qualifications and personal qualities are exceptional. It is those people who we need to become better at identifying and retaining within the company," says Per-Olof Nyquist.

Lena Widegren



Per-Olof Nyquist



The road to equality starts with the managers. In the second part of Contact's series regarding equal opportunity issues at Ericsson, we meet women in managerial positions. Britt Reigo, Senior Vice President, Corporate Human Resources at Ericsson has become a model for female managers.

# Managers

## - the keys to equality

**E**qual opportunities work is incredibly important, yet also difficult. It's really all about how courageous managers are, says Britt Reigo, Senior Vice President, Corporate Human Resources at Ericsson.

Whether she likes it or not, Britt Reigo has become the standard for what a female senior vice president should be like. She is the only woman on the corporate executive team and has, during her eleven years as the head of human resources, seen CEOs come and go.

Britt Reigo began working at Ericsson in 1988 as the Senior Vice President of Human Resources. By that time, she had held senior positions at SAS airlines, the SSAB steel company and the SPP insurance company. She was only 24 when she received her first job as a human resources manager.

"At the time it was intriguing, and somewhat quaint to have female managers. And I, for that matter, was a manager of an area where women were fairly well accepted. It's more difficult in a line manager position."

### Equal opportunities

Managers are often the key to equal opportunities according to Britt Reigo. Managers set salaries, promote and approve training. By making managers aware of equal opportunity issues and the differences between women and men, management hopes that the best candidates will become managers - regardless of whether they are male or female.

When Sven-Christer Nilsson became CEO, he promised that more women would be appointed to managerial positions. At the same time, Ericsson appointed its first female president in Sweden, Sigrun Hjelmqvist.

"The work to promote more women to managerial positions is not so simple. Most managers are men and it's easier to identify typically male traits. It is those traits that they recognize and feel comfortable with. Even women identify male traits more easily, since we are more familiar with male leaders. It's more difficult to see and envision what female leadership should look like," says Britt Reigo.

### Female leadership is difficult

"I'll go one step further. If a woman appears womanly, that doesn't fit into the image of being a leader, but if she presents herself more manly, then men say that she is blunt and unwomanlike."

*Have you yourself ever been subjected to such an attitude?*

"No, I haven't actually experienced that. Or, perhaps I've just not been receptive, tiptoeing my way around instead," she says, laughing

a bit. "I've had a little luck as well. I wound up at a high level within the organization early on."

*Shouldn't management have led by example and appointed more female managers in conjunction with the reorganization? Why didn't you take that chance?*

"It's not just about getting women into management, but rather getting people who have a good chance of being able to handle the job. We've discussed female candidates as well. But there simply wasn't anybody ready for that step."

"I still think, however, that relatively soon we will be able to have more female managers. I can think of a dozen women in their 40s who are on the path towards senior managerial positions."

### One in seven managers female

A number of things have happened over the past year. Last year, the number of female company presidents increased from one to three.

An additional two women have been named company presidents this year. The total number of female managers at Ericsson in Sweden has increased by 50 over the past two years, which means that almost 15 percent of managers are now female.

Still, that is a low figure considering that 30 percent of the employees are women.

"If a woman and man have similar skills and potential, I think that we should appoint the woman, in order to have more equal gender distribution."

"I think that our new evaluation procedure and the salary system which we are in the process of developing, will help promote equality within Ericsson. By systematically setting up clear goals and evaluating individual performance, women will have a better chance at being judged fairly. Women, in general, are not as good as men at marketing themselves or saying what it is that they are good at. Perhaps that's a prejudice that I have, but that is how I experience things."

*Is the issue of female managers the most important equal opportunities issue within Ericsson?*

"Not the most important, perhaps, but probably the most visible. If we appoint more female managers, that sends a strong signal and helps pave the way for other areas of equal opportunities work," says Britt Reigo.

### No drawbacks - or advantages

*Is there equality at Ericsson, in your opinion?*

Britt Reigo hesitates for a moment. "If you were to ask me whether I have



"If a woman appears womanly, that doesn't fit the image of being a leader," says Britt Reigo. "But if she presents herself more manly, then men say that she is blunt and unwomanlike."

Photo: Lars Åström/Världsbilden

equality, I would have to say yes. I don't think that there have been any drawbacks, or advantages for that matter, to being a female in my job."

*Does your answer apply to all of Ericsson?*

"No, we have some way to go," she says. "I'm mostly in touch with managers and some of the union representatives and, unfortunately, I don't meet ordinary employees as frequently. But I'm convinced that there is quite a bit of frustration out there among our female employees."

*You have managed to survive for ten years as the only woman in senior management. How have you done that?*

"I've learned over time. I have a rather womanly demeanor, but I probably think like a man when I categorize things. Being structured and analytical, typical leadership characteristics, are usually classified as being typically male," she says.

Mia Widell Örnung  
mia.widell@lme.ericsson.se

**Footnote:** Previous articles about equality at Ericsson dealt with equal opportunity work at Ericsson in Visby and with the work of Ericsson's Swedish equal opportunities committee, and appeared in Contact number 3/99.

SIX ERICSSON WOMEN ON EQUALITY

## "In some places we're better than others"

**Position:** Personnel manager for the European, Middle East and African (EMEA) market area. Previously she was a personnel and operational development manager at the RMOA business unit within Wireless Systems.

"For me, Ericsson has offered both new and interesting jobs offering great opportunities for ideas and taking initiatives. I've had good managers who have been supportive and encouraging."

*Have we achieved equality within Ericsson?*

"It varies in different parts of the organization. In some places we're better than others. But we need more women in managerial positions. I believe in a mixture, not only between genders, but also among different cultures", she says. "I believe this creates broader basis for making decisions then. We must actively work to change ingrained patterns of behavior such as those used during hiring."



**Marita Hellberg**



**Cindi Fitzgerald**

## "Diversity is positive"

**Position:** Works with business development for a new product in Ericsson Wireless Internet. She has been with Ericsson for 14 years, 13 of them in research and development, most recently

as an R&D department manager.

"I feel that I have gotten the same opportunities as a male. I think that women in general at Ericsson here in the U.S. do. I have also worked with Ericsson in Sweden and Germany, and although I never felt discriminated against, I sure did notice there weren't so many women around in R&D! But that may

have as much to do with the culture of the countries as it does the culture of our company", she says.

"I think it is good to have female managers in the company because, if I may stereotype here, women often bring a different perspective to management, a different negotiating style, and a different people management style, and that diversity is often positive".

"Also, if the company is perceived as having a glass ceiling, it could reduce our ability to attract valuable talent at all levels. I think there are probably too few women managers at Ericsson today. Mentorship programs for women and more family-friendly policies would probably encourage more women managers".

## "New opportunities are being created"

**Position:** New president of Ericsson in Denmark. She is the first female president of a foreign company and the first woman to be named manager of a market unit within Ericsson's new organization.

"My appointment as President of Ericsson in Denmark is proof-positive that new opportunities are now being created for women

within Ericsson", she says. "It's good for the company, since we women have a great deal to offer in terms of personal qualities not always as prevalent among male colleagues.

A longer interview with Conni can be found on page 2.



**Conni Simonsen**

## "More men should rotate"

**Position:** Customer service manager within the Swedish marketing unit. Ewa Lundberg is a trained engineer and has worked at Ericsson for 20 years.

"I think that I've received good opportunities at Ericsson, but of course there is an imbalance. We do not yet have equality at Ericsson, but that is not so strange considering it is so male-dominated. Still, it feels as though things have become better and that there are now more women.

"When I received the job offer last autumn, I was at first reluctant. For me, it's important to find a balance between work and leisure time, especially since I am a single parent with a ten year old son. But it has actually worked out very well. I have a good management team under me and I'm able to rely on others a great

deal. I have no need to be continuously checking up on them.

"I think that it is more common for women to quit their managerial jobs. I took a break in my managerial career a few years ago and became an account manager. Several of my male colleagues could not understand how I could move down in rank, but I believe that we as women are continually questioning and checking to see if the costs of being a manager are worth it", she says.

"It is a heavy responsibility and quite a lot of work. In addition, it is healthy to change jobs, to rotate and learn something new. More men should do that."



**Ewa Lundberg**



**Susanne Lithander**

## "Equality at Ericsson varies from unit to unit"

**Position:** Executive Vice President and General Manager at Ericsson in the U.S., with responsibility for Private Radio Systems, which has 850 employees and has headquarters in Lynchburg, Virginia.

"Equality at Ericsson varies from unit to unit I think. I have spent a large portion of my time within Ericsson Components, and there was equality there, but I think that it depends more on society in general, rather than on Ericsson."

"Sometimes I get the feeling that I, as a woman, should be 'grateful' to have the chance; that the company dares to stand behind a woman as much as it sometimes dares to try untested male candidates.

"But much of that equality needs to come from us as women. We have to be willing to

take a chance as well, and not look down on other women and think that they are bad mothers because they dare to invest both in themselves AND their families. I have experienced negative responses, but only from other women who decided not to take the chance, not from men or from Ericsson.

"Support from my former managers at Ericsson Components has been important for me. When we had children, I had the freedom to do my job in a way that worked both for me and the company.

"It has also helped that my husband has chosen a different career, that of teacher. He has now been at 'home' for three years and taken on a large portion of the responsibility for the children, school, household, dropping them off at daycare and so forth."

## "I'm extremely impressed"

**Position:** Manager of Ericsson CyberLab in New York. Donna Campbell came to Ericsson in March 1998. Prior to that, she was a consultant for multimedia companies in Silicon Valley.

"I am extremely impressed with the caliber of the female managers that I've met within Ericsson" she says.

"One of the advantages of Ericsson's management structure, in my opinion, is that we work as a team. Being female or male is of no significance since we have to work together to achieve something".

"And yet, most of those who come to work at CyberLab are male. We are also attracting

highly competent female managers, but we need to attract more. Women form the biggest block of purchasing power in the world, especially in western nations. How then can a company manufacture products and services for a market that it does not reflect?"

"I'm convinced that it is very important to have diversity in our management groups. Not just a mixture of men and women, but also different cultures, since diversity leads to innovation and flexibility."



**Donna Campbell**

### WOMEN AND MEN IN MANAGEMENT AT ERICSSON IN SWEDEN

Swedish equal opportunity law requires employers to make an annual survey of differences existing between men and women in all Swedish workplaces. The figures below represent the situation at Ericsson in Sweden. As of December 1996 there were 43,042 people employed at Ericsson, including 3,274 managers.

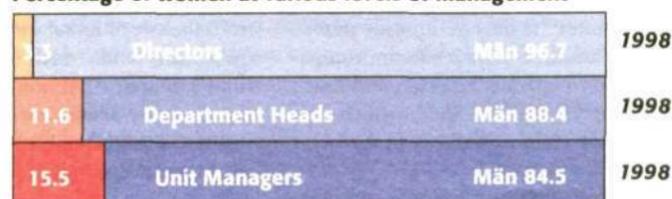
#### Percentage of women of all employees



#### Percentage of women among all managers



#### Percentage of women at various levels of management



Ericsson does not yet have any figures for the company as a whole. Contact would be happy to describe the situation in countries other than Sweden.

## New issue of Ericsson Review

The issue number 1, 1999 of the Ericsson Review, is now released. Ericsson Review is celebrating its 75th year in publication.

Beginning with this issue, both the paper-based and electronic versions of the highly respected technology journal has a fresh new look and feel that is indicative of the journal's role of reporting on telecommunications technology at the cutting edge.

This issue of the Ericsson Review contains in-depth articles about Ericsson's products



and technological developments. Amongst other articles, there is one about Ericsson's Pro products, comprising services which offers traditional private mobile radio functionality. Furthermore, there are articles about the EPOC operative system, Ericsson's e-box system, and EDGE, Enhanced data rates for GSM and TDMA.

For a first-hand look at Ericsson Review or to subscribe to the journal (subscriptions are free), visit the journal's web site at: <http://www.ericsson.se/Review>

# Alone at work - but not lonely

Nicaragua is a country with a history at times bloody and dogged with misfortune. A brutal civil war between the Sandinistas and the Contras took place from 1979 to 1990, and at the end of 1998 the country was hit by the worst natural catastrophe in 25 years - Hurricane Mitch. Despite its setbacks, however, a cautious optimism is growing in the country.

The Nicaraguan economy is creeping upward, even though Hurricane Mitch erased most of its 1998 gains. Several large companies have begun to establish themselves in the country. Among them is Ericsson, established in Nicaragua since June 1998.

Ericsson started its Nicaraguan operations in earnest in June 1998. Previously, in the 1970s, the company maintained limited sales operations for PBXs, which did not do particularly well. In 1979, the bloody civil war broke out, lasting until 1990, and Ericsson put its Nicaraguan operations on ice.

#### The world's smallest Ericsson office

Now, Ericsson is making a second attempt to establish itself in the country, with investment supported by the recently formed marketing unit for Central America. Following the reorganization, the marketing unit has the responsibility for all Ericsson activities in Central America, which were previously controlled by Ericsson in Mexico.

Ericsson in Nicaragua currently consists of one employee, named Fernando Avila-Urbe, who represents Ericsson in dealings with telecom companies and government authorities. Such minimal staffing qualifies Ericsson's Nicaraguan office as the smallest in the world.

"However," says Fernando, "I am certainly not lonely. The entire Ericsson corporation is but a phone call away. I have already had a great deal of help from Ericsson personnel in Sweden, Mexico, Spain and Brazil."

Nicaragua has suffered enormously from nat-

ural catastrophes. In 1972, most of the capital, Managua, was demolished in a tragic earthquake which left 250,000 people homeless and killed 10,000. Still today, the city has not been completely rebuilt after the earthquake, due to lack of funds - Nicaragua being the second-poorest country in Central America.

#### Hurricane Mitch killed 3,000

At year-end 1998, the country underwent yet another natural catastrophe - Hurricane Mitch. It is estimated that 3,000 people were killed and 40,000 lost their homes. The damage has been estimated at USD 900 million, which is equivalent to half of the country's annual GDP.

According to Ericsson's figures from January 1998, 9,500 people in Nicaragua own a mobile telephone. Compared with the country's population - 4.4 million - this can be expressed as a record-low 0.2 percent. Compare this figure with Sweden's penetration of 40 percent and it becomes clear that a mobile phone is still a luxury item down here. By year-end, however, the number of subscriptions had increased to about 12,000.

#### Ad campaigns create awareness

Ericsson recently launched a joint ad campaign with Bell South, which includes an offer of an Ericsson D-AMPS telephone for USD 9.95. This is expected to increase public awareness of Ericsson, but not to result in any major sales increase. A subscription costs USD 25 per month, here in Nicaragua, where the average monthly income is USD 150 and unemployment is about 60 percent. So, while the telephone is inexpensive compared to monthly salaries in industrialized countries, very few Nicaraguans will be able to afford it. Today, a mobile phone is a possibility only for the country's wealthy people and for companies.

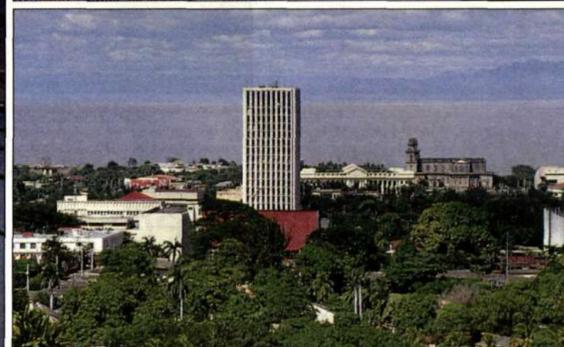
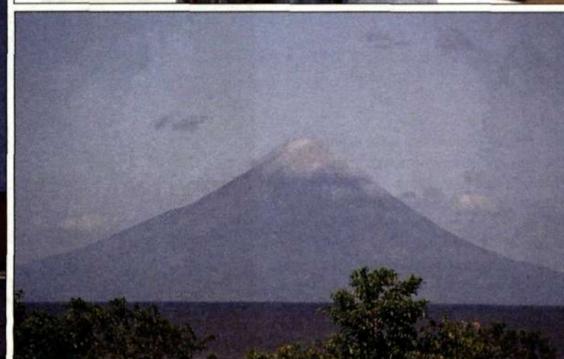
#### Undergoing privatization

Work is currently under way to privatize Nicaragua's national telecom company, Enitel, the company has 3,150 employees and 140,000 lines in operation. A full 96 percent of the lines are digital, since most of the network was constructed after 1990, when the civil war ended. Telephone density is consequently three percent. Enitel also operates the only nationwide mobile network in the country. Private telecom companies are allowed to operate, however, and Enitel now has a competitor in Bell South, which is licensed to provide mobile telephony in the larger cities.

When the process of privatization is complete, the Nicaraguan state will own 49 percent of the company and the remainder will be owned by private companies. Two telecom companies are currently considered ownership candidates -



Left: The telephone poles in Nicaragua can create an impression of confusion. Right: In Nicaragua, a country with many volcanoes, after the long civil war the average age of the population is low: 50 percent are under 16. The country is the second-poorest in Central America and many people live in slums. Bottom: View of Managua, Nicaragua's capital city. Photo: Per-Erik Eriksson



Billboards displaying Ericsson ads have become a common sight in Nicaragua in the past year.



Fernando Avila-Urbe is Ericsson's man in Nicaragua.



## CHRONICLE

# Pentium in a shack

Nicaragua is a country with an exciting, dramatic history. To understand why the country looks the way it does today, you have to know a little about its history.

It all started in the 1600s, when the Spaniards arrived and built the first cities. The coming of the Spaniards to the country led to Spanish becoming its official language. It also meant that many Spaniards settled permanently and that the history of the indigenous people virtually disappeared.

#### Oppression...

In modern times, the country was shaped by the dictator family, the Somozas, who took power in 1936 through a military coup d'état. They managed to stay in power until 1979, when the population rebelled against their oppression and started a revolution.

At that point, the Somoza family was estimated to be one of the richest families in the world. The revolution succeeded and Somoza was ousted, to the people's jubilation.

However, shortly after the revolution, civil war broke out. Nicaragua again drew the attention of the world. The involvement of both the US and USSR prolonged the civil war to 1990, when the first democratic election was held in the country.

#### foreign aid...

Civil war and natural catastrophes have left the country highly dependent on foreign aid. It is considered the second-poorest country in Central America - only Tahiti is poorer. Its GDP is USD 476 per capita. Average monthly income is about USD 150 and the country has an unemployment level of about 60 percent.

Nicaragua receives aid from many countries, and organizations such as the Swedish International Development Cooperation Agency (Sida) have operated in the country for a long time, supporting many projects. About half of the employees of the Swedish embassy in Managua - much more than the normal proportion - are involved in various Sida projects.

The great number of foreign-aid projects makes for stark contrasts - for example, a corrugated-iron shack that serves as an office might contain a Pentium computer with Windows 98, or brand-new photocopiers. Almost all such expensive equipment is sponsored by some other country. On municipal jeeps, you may see signs such as "Sponsored by Finland," or "Sponsored by Japan."

#### ...and friendliness

Considering its history, you would think Nicaragua would be an unfriendly country. Actually, the opposite is true. The Nicaraguans seem to be tired of war and natural catastrophes, and strangers are therefore received with curiosity instead of animosity. Even the police and the military have a friendly attitude and are glad to be of assistance to anyone who might need help.

As a visitor to the country, you need not feel afraid of them; they can actually be helpful.

Faith in the future exists in Nicaragua, as does optimism. As long as the country is spared more natural catastrophes, it could very well become a flourishing nation - but the path is long and will involve much hard work.

Per-Erik Eriksson

for us to obtain the assistance we needed," Fernando concludes.

Per-Erik Eriksson

## NICARAGUA

**Population:** 4.4 million (1994)  
**Inhabitants under 16 years of age:** approximately 50 percent  
**Area:** 148,000 square kilometers  
**Currency:** Córdoba (after the Spanish Hernández de Córdoba, who founded Nicaragua's first two cities in 1524)  
**GDP per capita:** USD 476 (1996)  
**Language:** Spanish  
**Mobile system:** D-AMPS

Mexican telco Telmex and its Spanish equivalent Telefónica. In June 1999, it will be decided which of the two will be the new principal owner.

Privatization of Enitel has been promoted by agencies such as the International Monetary Fund (IMF) as a condition for a "structural adaptation program" for Nicaragua. Proceeds from the sale of Enitel will be distributed among investment funds which will offer small loans to rural ventures, rural housing projects, social issues, poverty alleviation and infrastructure investments. A total of USD 60 million is expected to be extended as loans to such projects.

#### Heavily investments

Ericsson invests heavily in advertising. In cooperation with Ericsson Mobile Communications, several ad campaigns have been carried out to

strengthen public awareness of the Ericsson brand.

Full-page ads are run several times a week in the daily press, emphasizing that Ericsson is a future-oriented company in telecommunications. A number of joint campaigns with Bell South have also been mounted.

#### Becoming known among the public

"Ericsson is beginning to become known among the public," says Fernando Avila-Urbe, "and most people in the country know that Ericsson is a company involved in telecommunications - even though we have only been operating for six months. That reflects well on the ad agency," Fernando adds.

Ericsson operates in a tough market. The largest competitors are represented, and they all want a share of the new market that will arise

from the privatization of Enitel. The competitors include: Alcatel, Siemens, Lucent, Nortel, Samsung and Nokia.

Ericsson has had a certain degree of cooperation with the Swedish embassy in Managua - cooperation that is just starting.

"We have held a number of seminars with Ericsson," explains Swedish ambassador Jan Bjerninger, "Unfortunately, however, Mitch delayed our plans."

#### Excellent cooperation

Fernando Avila-Urbe's experience of cooperation with the Swedish embassy has been wholly positive.

"They helped us in our efforts to establish Ericsson in Nicaragua. We have benefited from their contact network and it has never been a problem

"We are working on many new ideas and are always looking for new concepts in marketing," says Eleana Pagoulatou, market communications manager at Ericsson Hellas.  
Photo: Ulrika Nybäck



Intense and rather unconventional marketing has enabled Ericsson to capture a record-high share of the Greek market.

"Greeks attach strong values to the Ericsson name when they buy mobile telephones; the name stands for status and quality," says Eleana Pagoulatou, market communications manager at Ericsson Hellas.

## At the movies in Greece

Ericsson sells large numbers of mobile telephones in Greece. In 1998, its market share was 54 percent. Without certain delivery problems, it would have been even higher. Ericsson's market share for the two preceding years was 65 percent, compared with average shares of about 20 percent in other countries.

What has Ericsson done to win such overwhelming consumer confidence in Greece?

"It means a great deal for Greeks to buy the Ericsson name, a name associated with status and quality. We have worked hard to position ourselves in the market and, obviously, we have succeeded," says Eleana Pagoulatou, market communications manager at Ericsson Hellas.

"As most people know, Nokia is strong in terms of talk time and standby time, but Ericsson in Greece may be likened with Coca-Cola in the U.S. When consumers are asked to take taste tests with blindfolds on, almost everybody prefers Pepsi, but Coke still commands the strongest market share."

### Cinema sponsorship

When Eleana Pagoulatou joined Ericsson's marketing organization in Greece four years ago, she worked alone. Today, she is one of five marketing employees. Marketing personnel have worked with many different activities to make the Ericsson name more visible. The company sponsors 13 cinemas in the greater Athens area, for example. Every cinema has the Ericsson name attached to its own name.

"When we decided to sponsor the movie houses, our motto was: 'You have to get them young, to get them forever.'" One of the advan-

tages of cinema sponsorship is the exposure we get in daily newspapers through movie ads," continues Eleana Pagoulatou.

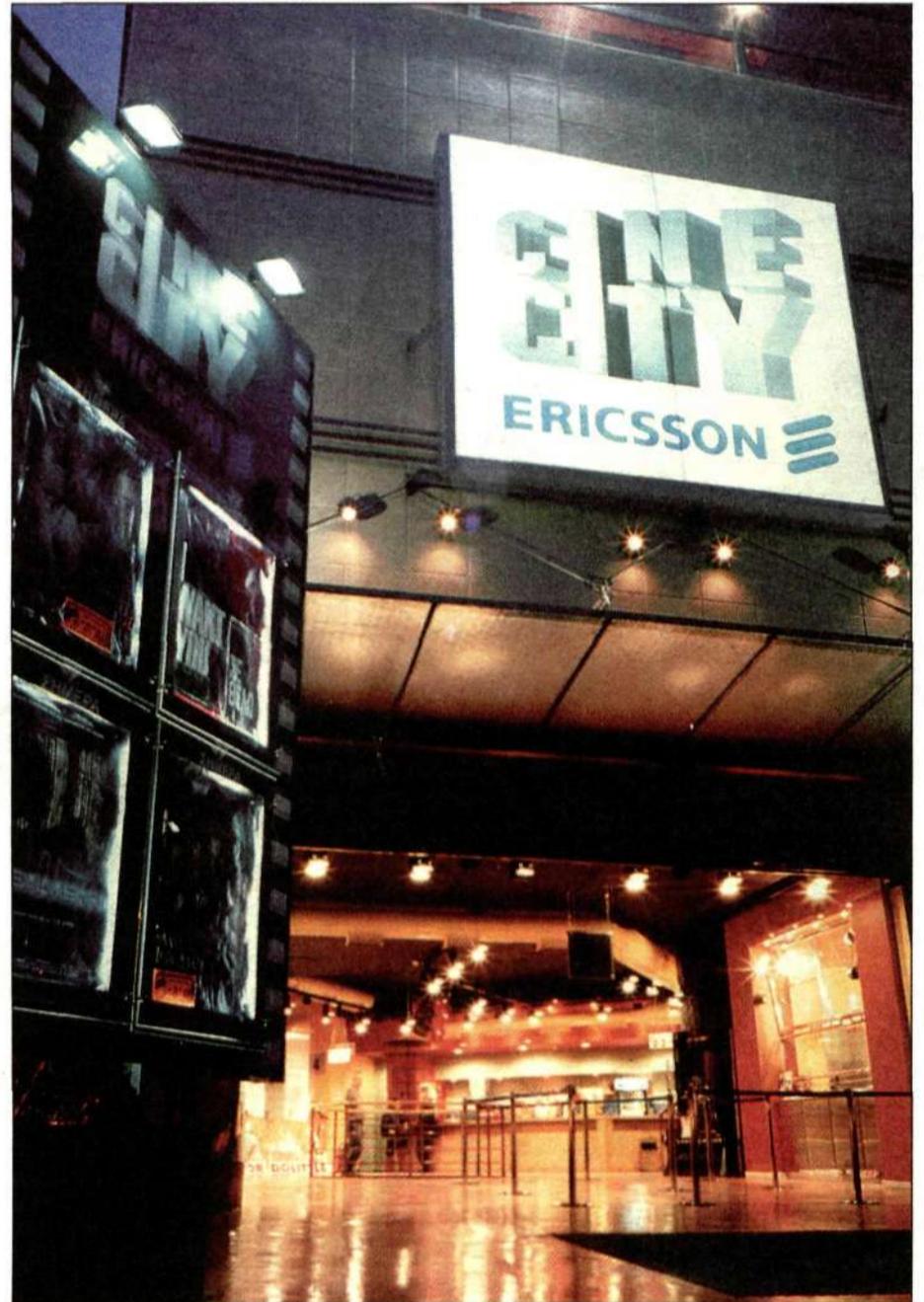
Ericsson Hellas has taken an holistic approach to marketing. The company displays examples of "good citizenship" by inviting physically disabled children to one-day cruises on a yacht sponsored by Ericsson during a three-week program conducted every summer. The boat is also used for cruises with customers, retailers and journalists.

### Prize for best student

The company also recognizes the importance of making its name known among potential employees. Ericsson Hellas has established a prize for university students in Greece, awarding the prize for best student performances in telecommunications and networking. The prize is awarded annually by the Greek minister of communications and Lars Björkenor, President of Ericsson Hellas, and includes a trip to Ericsson's head office in Stockholm.

Retailers comprise another important element in the marketing process. To stimulate retail sales, Ericsson Hellas has established a bonus system called "mobile miles," whereby retailers are awarded points based on the number of Ericsson telephones they sell. A small number of points earns them a ticket to the movies at one of Ericsson's cinemas. With a large number of points, they can win an automobile.

Ulrika Nybäck  
ulrika.nybäck@emw.ericsson.se



Ericsson's sponsorship of cinemas in Athens provides exposure in daily newspapers.

Photo: Dimitris Koumaras

## Network Operations is opened day and night

The Network Operations unit of Ericsson in Greece is growing fast. During the four years since it was started, the unit's workforce has increased many times over. "I have been part of fantastic growth and development. We have progressed from a small sales company to a knowledge company," says Dag Svesse, manager of the unit.

Network Operations, a unit of Ericsson Hellas, established its GSM operations in Athens five years ago. Dag Svesse, manager of the unit today, and a handful of other enthusiasts started working for Network Operations four years ago. Today, the unit has more than 60 employees.

"I have been part of fantastic growth and development. Ericsson Hellas has progressed from its original status as a small sales company to a modern knowledge company. Our employees have been the main force in our success. They have the skills and expertise, the determination and motivation that drives our operations forward," says Dag Svesse.

In Greece, determination and motivation are common personal traits. Greeks have a strong individual drive to develop and succeed in their professional lives. They also have national ambitions to develop their country and breathe new life into its economy. EU flags are seen here and there, a symbol of pride among

Greeks over the nation's membership in the European Union. And the country is working hard to qualify for membership soon in the European Monetary Union (EMU). According to economic forecasts, that day is not far in the future.

### Competitors and customers

There are still not many established telecom companies in Greece. OTE, the government-owned company, will retain its monopoly in voice telephony until the year 2001. Lars Björkenor, President of Ericsson Hellas, is convinced the market will be liberalized earlier. Two GSM licenses were granted in 1992, one to Panafon, a company owned by Vodafone of England, and the other to STET-Hellas, owned by the STET Group of Italy. Both operators have based their networks exclusively on products from Ericsson. Network Operations supplies the companies with switches, base station controllers (BSS units) and nodes, in addition to

managing maintenance operations and deliveries to the country's two large operators. The list of customers also includes the Greek Air Force and Cyta, the GSM operator on Cyprus.

"We have high hopes of winning orders soon from Cosmote of Greece, which is now a Nokia customer. Negotiations are also being conducted with competing companies that include Siemens, Motorola, Lucent and Alcatel.

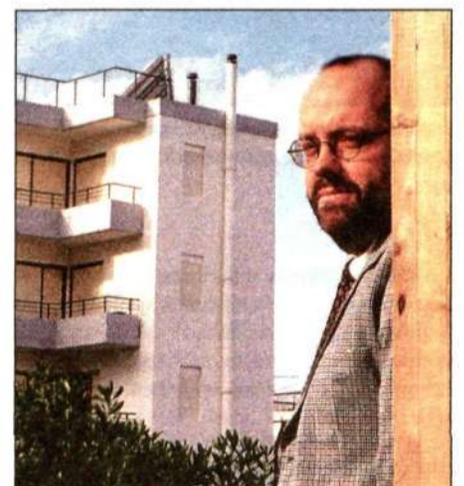
"We work hard to keep our customers satisfied. They can contact us around the clock and we recently started enclosing questionnaires with every delivery, so customers can make comments, good or bad, and express their opinions about our products."

One of the unit's future goals is to offer customers more complete solutions. In addition to deliveries and maintenance, Network Operations also wants to manage operations and develop networking activities.

### Potential in Balkan region

Lars Björkenor and Dag Svesse both believe that Balkan nations and other countries around the Black Sea have the potential to become a major market region within the next few years.

"OTE of Greece has a clearly defined Balkan



"We put customers first," says Dag Svesse, manager of Network Operations in Greece.

Photo: Ulrika Nybäck

strategy, and has already acquired a number of telecom companies in the region," says Lars Björkenor.

Ulrika Nybäck

# New idea makes AXE switches unnecessary

When software researchers in Dallas, Texas, couldn't afford to buy two new, half million dollar test switch, they decided to improve their simulation environment with a tool that makes AXE switches unnecessary for testing. This resulted in one of the best improvements of 1998 – the RISE interface.

After inspecting Trouble Reports, it was concluded that a majority of the errors were due to incomplete or delayed tests.

Projects operated under short deadlines, there was a shortage of available test time on existing equipment and it was expensive to purchase new testing equipment.

In addition, it was felt that AXE switches should be removed from testing facilities, or re-used for certain difficult hardware tests, and utilized for actual traffic on the network.

## Functions as an interface

It was out of these considerations that RISE – Radio base station Interface in a Simulated Environment – was born. It functions as an interface between real radio base stations and a simulated telephone network. A necessary requirement for RISE to work was a good simulation environment. Such an environment was available in a UNIX-based platform, developed in Karlstad, known as the Simulated Test Envi-

ronment (STE) for AXE, mobile switches and control units for base stations.

## The preparation took time

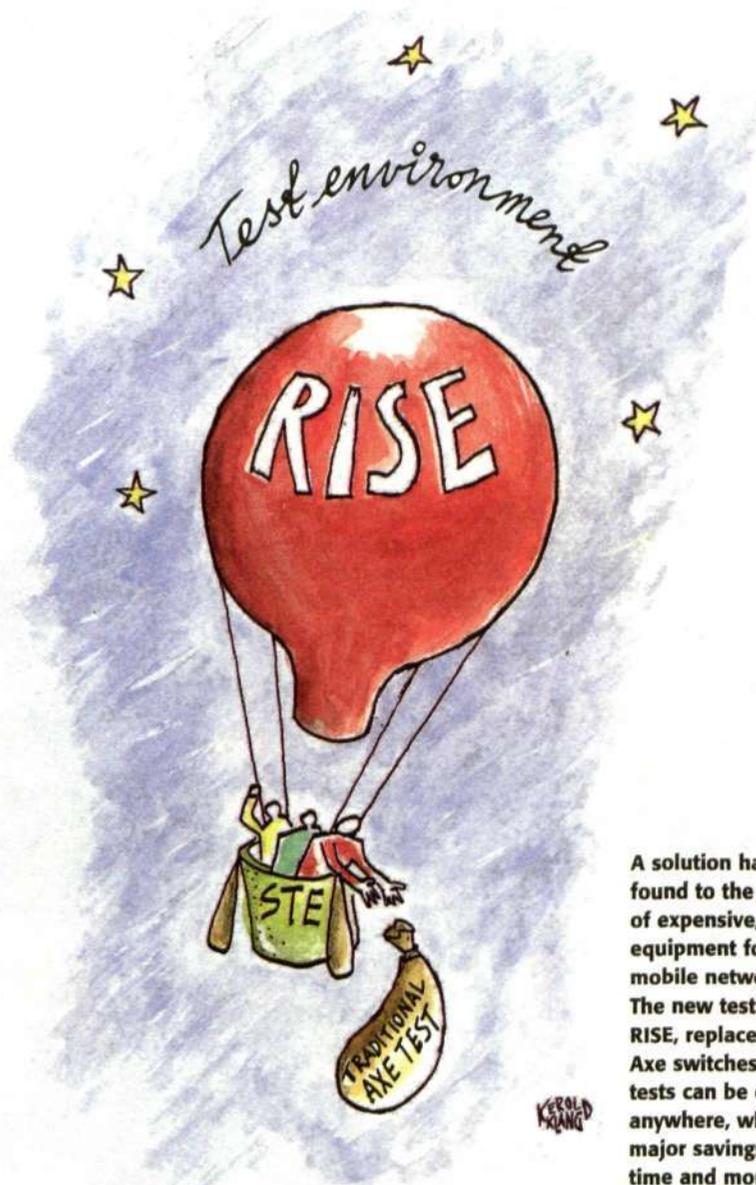
What was not available was a good interface for the radio portion, that is, base stations and the like. In the past, mobile calls had been simulated, but these simulation programs often suffered from large amounts of preparation time for documentation, simulation scripts and constant protocol updates, all of which were subject to errors which, in turn, complicated testing.

Using RISE, it now became possible to link up with real radio base stations and mobile telephones, solving the problem of having to simulate mobile calls. It also saved a great deal of time and money. Every time an AXE 10 testing unit is replaced with a RISE, there are savings of USD 0.8 - 1.5 million. And when conducting network tests, several switches are needed simultaneously, so this solution has



The RISE project was presented at the final of the competition for the best improvement project within Ericsson in 1998. Here are some of the originators of RISE – from the left, Bob Gessel, Betzy Gonzalez and Kevin Auto from the design center at Ericsson Inc. Wireless Communications in Richardson, Texas, U.S.

Photo: Anders Anjou



KEROLD KLANG

A solution has been found to the problem of expensive, bulky equipment for testing mobile networks. The new testing tool, RISE, replaces real AXE switches and now tests can be carried out anywhere, which means major savings in terms of time and money.

Illustration: Kerold Klang

been calculated to provide 90 percent savings.

The test equipment takes up very little space. More or less everything fits into a cabinet on wheels, allowing for the test station to be moved to wherever it is needed (compared with AXE units which take up approximately three room modules). It can be used for training and there is even a portable version of RISE becoming available to customers. Over the long term, RISE will not only save money but also provide new income.

"We feel as though we have always operated according to the 'new Ericsson' principles," says Bob Gessel, the man behind RISE. "We operate at a global level and are constantly monitoring what is going on within Ericsson globally. We've done quite a bit of traveling, but rather than calculating what our trips have cost, we've concentrated on what we've been able to get out of them."

## Quick development

"It was that work method which also enabled us to develop RISE in such a short period of time. In reality, RISE is the product of several research efforts within Ericsson. What we did here in Dallas, with a total of about eight people on the project globally, was primarily to come up with the idea and then assemble the design into an effective tool."

"We learned about the Stand Alone Test Tool product (SATT) developed by Erisoft in Umeå, and gave them product specifications that enabled it to be integrated into the UNIX based STE (creating, in the process, the RISE PC). The development company in Montreal, Canada, then assisted us in getting the RISE program to 'talk' with the APZ Emulator running the AXE software, the key challenge of the project. We then tested the various components and assembled them into one unit. The entire process proceeded very rapidly and was quite inexpensive for us," says Bob Gessel.

Bob also describes how they continually strove to test the limits of the simulation envi-

ronment. Nobody, not even those who had developed STE, had any idea how much it could handle. While originally intended to be used for D/AMPS, it was soon decided to use RISE for GSM as well, and it played a crucial role in getting the GSM-on-the-Net field trial onto the market quicker than originally planned.

"Today, RISE is now in demand throughout the Ericsson world, in such places as Madrid, Greece and Chile, while it is already in use in Germany, Ireland, the U.S. and Mexico," says Kevin Auto who has assumed responsibility for RISE, now that Bob Gessel works mostly with GSM-on-the-Net.

## The right time

RISE has a clear role to fill, both in the testing of new functions and services as well as in training, especially for GSM networks with their expensive equipment. RISE was developed at just the right time since Ericsson, like other telecom companies, is moving away from testing switches to testing networks instead. RISE and STE can help keep the expenses of testing realistic networks to a minimum for Ericsson.

"As far as we know, none of our competitors has anything this powerful," says Bob Gessel. The challenge for RISE as a mainstream test product is to have enough resources to allow RISE/SET products to grow, while at the same time needing growth in order to acquire more resources to make it happen.

That problem will probably take care of itself and RISE now stands ready for new conquests. RISE has made it possible to develop comprehensive products such as GSM-on-the-Net field trial. A whole new GSM network can now be installed inside a small box and, in the future, GSM networks like this could become products of their own.

Lars Cederquist  
lars.cederquist@era.ericsson.se

<http://www.exu.ericsson.se/EUS/GN/KE>



A new Extranet service makes the order process much more efficient for GSM operators and Ericsson. Just like in a supermarket, customers can select the items they want and obtain product information. The ultimate objective is that customers will be able to order all GSM products via the Extranet.

Photo: GreatShots

# Extranet – an efficient supermarket for operators

Ordering products and product information on-line and downloading software are just a few of the functions in a new Extranet service for telecom operators.

The service is now being tested by a number of European operators and will be launched worldwide this summer.

The new service consists of a basic package that will be expanded over time. Operators will be able to access the service via a distinct network towards Ericsson. This is an Extranet, which is a cross between the Internet and an intranet. The information on the network is subject to access control, but since it is outside the firewall, customers, suppliers and other business partners can work together with Ericsson.

Currently, the basic package includes products, ordering, documentation, service and support.

"Now that operators are able to access all information relating to GSM products from a single source, the purchasing process is greatly simplified. It is possible to do everything from obtaining product information and placing orders to downloading software around the clock," says Rickard Langenfeld at Ericsson Radio Systems, who likes to compare the service with a supermarket in which users can walk around and pick out what they want.

Previously, operators often had to contact several Ericsson companies, which was overly time-consuming. The new Extranet service al-

lows both the operators and Ericsson to work more efficiently.

## Now much simpler

"The greatest savings are that lead times are significantly reduced and that everything is much simpler," says Bengt Hartman at Ericsson Radio Systems, who together with Rickard Langenfeld was responsible for developing the new system.

Products and ordering also includes product information on base stations and GSM on the Net, which is a new product that integrates GSM with the Internet, meaning that all information in an office is available via a GSM terminal. According to Rickard Langenfeld, additional product information will be added by the summer.

It will also be possible to order products on-line. This part of the system is currently under development.

"The ultimate objective is that the operator should be able to order all of Ericsson's GSM products on-line," notes Rickard Langenfeld.

Base station orders will be confirmed within

24 hours, with delivery promised within 15 days. The operator can track the order's progress through various transport links all the way to its final destination. If a delay occurs, it is possible to locate the item and obtain information about its current location and a new delivery date.

The documentation section contains operations manuals for the entire GSM system, consisting of a total of 15,000 documents with more than 500,000 pages.

"Swedish operator Telia and Norwegian operator Telenor have shown great interest in the operations manuals," relates Bengt Hartman.

Service and support consist of several applications. Operators can download software and place service requests for GSM products.

In addition, the operator can track other operators' reports of serious problems and find out what solutions have been proposed and what progress has been made in solving problems.

## Customized Extranet

Each operator will have its own customized Extranet.

"An operator in Norway will probably not purchase the same equipment as a Swedish operator. It may be desirable, for example, to adapt product information to local

market requirements," notes Rickard Langenfeld.

Telenor in Norway, Swisscom in Switzerland and Telia in Sweden are operators who have tested various parts of the Ericsson service. Telia after more than one year's use has the greatest experience.

"The test operators have learned to work with the Extranet and now use it in conjunction with joint projects with Ericsson," reveals Rickard Langenfeld. "Telia also downloads software revisions for various GSM products, giving them continuous access to the latest versions of the software. Distributing software in this manner is much more efficient."

## Computer-based training

Computer-based training will also be a part of the new service, according to Bengt Hartman.

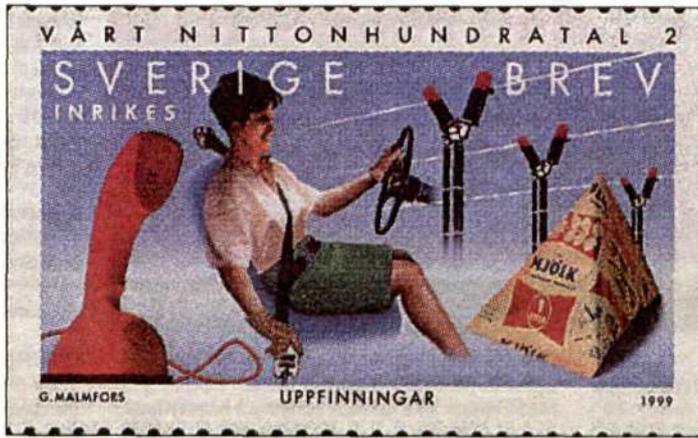
"I believe that this function will enable the Extranet to become a viable alternative to conventional training courses," says Bengt Hartman.

"In the future, we hope to be able to offer new and advanced services over the Extranet, but it is just as much a matter of offering existing products and services in a new way and with a new packaging," concludes Bengt Hartman.

Ulla-Karin Höynä

# Inventions of the century

On March 11, the Swedish National Postal Administration launched its second series of stamps entitled "Our 20th century." One of the stamps depicts an Ericofone, the "Cobra" – in good company with the Volvo three-point seatbelt and the Tetra Pak milk carton. It is now 23 years since the last series showing telephones was issued.



The Ericsson Cobra, shown together with other inventions.

On March 10, 1976, the National Postal Administration celebrated the one-hundredth anniversary of the telephone by issuing two commemorative stamps, featuring Ericsson's well-known Bakelite telephone from 1931 and an old Ericsson-made telephone receiver.

The following is a quotation from the folder that accompanied the first-day covers: "March 10,

1876, was a historic day in human communication. On this day, the first words ever uttered into a telephone were transmitted to a remote listener. The words were: 'Mr. Watson, come here. I want

you.' (Watson was a colleague of Alexander Graham Bell). The reason for the message was that Bell had accidentally spilled a bottle of sulphuric acid onto his trousers. The injury was forgotten when

Watson came running into the room and announced that he had heard every word Bell had said."

Only a few weeks later, Lars Magnus Ericsson started his first workshop in Stockholm, which in a few years came to be an important link in the development of telephones.

In the summer of 1877, the telephone was exhibited in Sweden; by 1880, there were so many telephone lines that it was necessary to build a switching station.

From then on, things developed very rapidly. In 1885, there were more telephones per capita in Stockholm than in any other city. Today, Stockholm is one of the world's cities with the highest number of mobile phones and Internet subscriptions per capita.

Thord Andersson

thord.andersson@lme.ericsson.se

## NOTEWORTHY

### Cobra adorns book cover



Walking in Paris among the bookstores of the university area around the Latin Quarter, I

did a double take when I saw the Ericsson Cobra telephone illustrated on the cover of a charming little book about telephones.

The book described 36 phones from around the world. No less than five of them were Ericsson models, including the Ericofone on the cover.

The book, originally in English by Paul Clerk, is entitled *The Phone* and it is published by the Ivy Press Limited, London, 1997. The French edition from 1998 is published by Librairie Gründ, Paris.

Thord Andersson

### Italian personnel prize

Ericsson in Italy has received a prize for its efforts to develop its human resources organization. The "Premio Sinergia Prize" is awarded every three years by an Italian personnel-management consortium.

Ericsson's Italian human resources unit shared the 1998 prize with five other companies. According to the jury, Ericsson has given its employees a clear vision of company goals, and guidelines by which to achieve these goals. The organization has also focused on better utilization of each employee's skills and establishing individual development plans.

## ERIC & SON



## Important people's Tamagotchi

Most readers are probably familiar with the fad of recent years surrounding the children's toy called "Tamagotchi", which was a tiny hand-held LCD video game that came attached to a key chain or bracelet. The object of the game was to simulate the proper care and maintenance of a "virtual chicken."

This was accomplished through performing the digital equivalent of certain "parental" responsibilities, including feeding, playing games, scolding, medicating, and cleaning up after the imaginary pet. The popularity of this device was quite phenomenal before the next must-have toys came along to take their place, and the Tamagotchis were relegated to the shelf alongside pet rocks, slinky springs and other cast-aside playthings.

Although the Tamagotchi was designed as a child's toy, not all owners were children. A handful of them were seen around the office here at the height of the craze, and goodness knows how many more were lurking in drawers and file cabinets – especially at our company's head office.

The bean-counters in Accounting regularly blamed their virtual chicken for their own mistakes, and Sales even formed a cross-department task force to propose releasing a

Tamagotchi with our company logo as a marketing gimmick. Luckily the prototype virtual pet died a real death after being starved by the representative from Finance, and the whole idea was scrapped.

This recent inglorious history passed before my eyes last week when I visited Head Office and walked in to the cafeteria. I spotted a furtive group huddled at a corner table, each holding an object in their hands that they proudly compared with one another from time to time.

When I drew closer I could see that the objects were small video games that were played by pointing some kind of pencil at the display. Few words were exchanged among the group as they peered into the tiny screens and set about their task with mouths set in lines of grim determination. The serious expressions around the table combined with the constant pecking sound of stylus on screen made me think that I was witnessing

the birth of the next generation of the virtual chicken family.

It was only when I had reached the table that I could see that the mysterious object that each held was a palm-top organiser. "Look! Mine can read my writing – almost!" exclaimed one, "Mine can remember phone numbers!" countered another. "That's nothing" replied a

third, "Mine can remember my wife's birthday!"

I couldn't help but think that my secretary could do all of those things and, coincidentally enough, jabbing a pencil at her is what is usually required to make her do something. But could these palm-top thingumajigs suggest an anniversary present for my wife and choose the right colour? And, hypothetically speaking of course, could they tell my wife when she called that I was in a late meeting instead of at some other late-night establishment?

As it turned out, the handful of souls gathered around the table were participants in a trial being conducted to see if the company's traditional agenda books could be scrapped and replaced by the new range of PDAs (personal digital assistants).

### Sheets of paper don't complain

I would be the first to agree that the paper system has its flaws, but I've yet to hear a complaint from a sheet of paper that it can't read my writing. On the other hand, I've not yet been able to transfer my writing from a sheet of paper into a computer. (My three year-old son has tried, however. He managed to take several notes from my diary, coat them with saliva and insert into the disk drive slot of my PC at home – unfortunately the only transfer that resulted was a large outgoing one from my bank account for the subsequent repairs.)

Roger Wilco



When I left the office that evening I began to notice people using PDAs on the street, in cafes and on the commuter train. While I admit that it may be very useful on occasion to be able to type or edit files on the train, I personally would find it hard to sacrifice that extra hour of sleep that I sometimes take during the morning commute – especially after a late night at a meeting or some other strictly hypothetical place.

### Slaves of technology

Despite our best intentions, we frequently make ourselves slaves rather than masters of the technology that allows us to work and play on the move. This is because we often forget that mobile phones, laptop PCs and PDAs are not like Tamagotchis.

They will not "die" if we don't use them constantly. And neither will we.

Roger Wilco, over and out.

Roger Wilco

In real life, Roger Wilco is a Technology Manager at a large international telecommunications company that he'd prefer not to identify.

# 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, send a memo to LME.LMEJOB.

Contact No. 4 1999

Updated March 15

### Ericsson Eurolab Deutschland GmbH, Germany

AMC and part of PN switching merged to CAPC. The Core Product Unit Application Core (CAPC) is responsible for providing transit switching and network access functionality commonly used by all Ericsson's wireless and wireline systems and is heavily involved in system innovation initiatives. CAPC is headed from EED, Herzogenrath/Aachen and consists of CAPC Management, CAPC International Operations, TCS Design and CAPC Verification. For further support of our teams we are looking for a

### DEPARTMENT MANAGER PRODUCT MANAGEMENT

● The CAPC Product Management Department is responsible for the product management of the transit switching and network access products that are common for many of Ericsson's AXE based systems, both for wireline and wireless systems. This responsibility includes activities such as business opportunity tracing, product portfolio management and positioning, project cost follow up, product decisions including prioritisation, road map planning, product agreements with other product units, toll gate assessments, supervision of requirements, arrangements of product planning meetings etc.. Present challenges are ATM backbone solutions for the Universal Mobile Telecommunication System (UMTS) and the Next Generation Switch (NGS).

As Manager for CAPC product management you will have a team of product managers working with you. It is the responsibility of this team to define application core deliveries that maximise Ericsson's profit and aligns with the group's overall strategy. Travelling will be a natural part of the job. To strengthen our international operations we are looking for an experienced Manager with more than 7 years of telecommunication experience.

**Contact:** CAPC International Operations Ulf Henell, eedugh@eed.ericsson.se, +49.2407.575-256 Ola Melander, eedome@eed.ericsson.se, +49.2407.575-255 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

### CAPC PROJECT MANAGER, NGS FEASIBILITY AND DEVELOPMENT

The CAPC project office has a dynamic group of overall project managers and administrators, managing key projects at the core of all applications. These projects encompass subprojects and associated projects in the Netherlands, USA, Ireland, Finland, Sweden, Norway, England, Spain, Italy, Germany, Denmark, Australia, Mexico, Croatia, Brasil and Greece covering a vast range of development areas at the leading edge of technology.

● Requirements: Degree of Engineering with specialisation in telecommunications or equivalent. At least four years work experience in technical aspects of telecommunication. Three years proven experience in project management. Good knowledge of PROPS, project planning, budgeting and management methods. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skill and good ability to work under pressure are important personal qualities. Travelling is a natural part of the job.

The main task will be to lead a large telephone system project (Next Generation Switch) with full responsibility for fulfillment of Ericsson's commitments to customers.

**Contact:** Project Office Imo Freese, eedwif@eed.ericsson.se, +49.2407.575-469 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

### PC-APT CHAIRMEN

The CAPC systems groups are responsible for the system development of the transit and network access products that are common for many of Ericsson's AXE based systems, both for wireline and wireless systems. This responsibility includes activities such as running product committees, handling overall technical coordination in the CAPC projects, perform system studies and source system design. Present challenges are system work for ATM backbone solutions for the Universal

Mobile Telecommunication System (UMTS) and the Next Generation Switch (NGS).

CAPC is responsible for running two PC-APT forums. PC-C/APT 210 25 is responsible for functional allocation and interfaces between XSS subsystems owned by CAPC and towards the mobile access subsystems. PC-APT 210 18 is responsible for the functional allocation and interfaces between fixed XSS subsystems owned by CAPC and towards the fixed access subsystems. An important task for these two forums is to find synergies and identify core application solutions between wireline and wireless systems.

Other important tasks for PC-APT are to maintain XSS (APT) system properties and structure, ensure that uniform solutions are implemented in XSS, handle allocation of functionality to products, act as a decision making body when a number of PC-ANTs can not come to a common decision and to handle allocation of functionality to products.

● To each one of these two PC-APT forums, we are looking for an AXE systems designer or software designer with at least 4 years experience, who is interested in leading and driving an inspection forum. As a suitable candidate you have good communication and cooperation skills and are able to understand complex technical problems.

**Contact:** CAPC Systems Kristina Martelius, eednka@eed.ericsson.se, +49.2407.575-692 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

### SYSTEMS DESIGNERS

● As CAPC systems designer you will perform system studies or design before or in early phases of our CAPC main projects. An important aspect is to find synergies and identify core application solutions between wireline and wireless systems. The type of tasks requires that you can work independently or in teams, take initiative and drive for progress.

To strengthen our capabilities for this type of systems work, we are looking for experienced systems designers with more than 3 years of Ericsson experience in AXE10 design. We are particularly interested in people who can provide significant competence in one or more of the following areas: ATM, TCP/IP, AM system development, signalling and protocols, data communication, intelligent networks and O&M.

**Contact:** CAPC Systems Kristina Martelius, eednka@eed.ericsson.se, +49.2407.575-692 Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

### TECHNICAL COORDINATOR FOR NGS3

● The CAPC NGS3 project technical coordinator coordinates technical issues involving several subprojects, the related wireline application projects and associated projects within the wireline and data networks systems. The CAPC main technical coordinator also supports the subproject technical coordinators.

To strengthen our capabilities within technical coordination, we are looking for an experienced system designer with more than 4 years of Ericsson experience in AXE10 design. As a technical coordinator on main level, you should have competence in one or more of the following areas: AM system development, signalling, data communication, ATM, O&M, resource modules, IN development or hardware modernisation.

**Contact:** CAPC Systems Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

### TECHNICAL COORDINATOR AMC PHASE 7

● The AMC Phase 7 project technical coordinator coordinates technical issues involving several subprojects, the related mobile applications projects and associated projects within the UMTS, CME20, CMS30, CMS40, CMS88 and CMS99 systems. The CAPC main technical coordinator also supports the subprojects technical coordinators.

To strengthen our capabilities within technical coordination, we are looking for an experienced system de-

signer with more than 4 years of Ericsson experience in AXE10 design. As a technical coordinator on main level, you should have competence in one or more of the following areas: AM system development, signalling and protocols, data communication, ATM, O&M, resource modules, IN development, UMTS or hardware modernisation.

**Contact:** CAPC Systems Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058 Human Resources Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

Ericsson Research Canada (LMC) has the mandate for software development for the global wireless standard, TDMA. We are developing next-generation software for future wireless networks, handling datacom and Internet services. We are also developing new net work and system architectures based on leading edge open systems technology. In addition to serving as a major R&D site, Ericsson in Montreal also houses the Technical Assistance Center (TAC1) for the TDMA system. The Technical Assistance Center provides 24-hour service for all national and regional cellular networks in the Americas, Canada and parts of the Caribbean.

### CUSTOMER INTERFACE REPRESENTATIVE

● As the primary technical liaison for a North American Customer you will be using your proven customer skills and technical aptitude to provide a single point of contact for all support issues. Through your outgoing personality and continuous contact with the customer, you will develop close ties with all levels of the customer's management and technical staff as well as gain valuable experience of the cellular business. Some of CMS8800 corporate customers are AT&T, Cantel, Bell south, South Western Bell, Cable & Wireless ...

The challenges of the position come in balancing technical, managerial and business issues within our corporate customers as well as within Ericsson. As customer interface, one is challenged with handling the customer's business and operations to their own benefit, whilst facilitating support internally; And on the other hand impacting support internally in order to improve our customers' satisfaction. The responsibility also includes promoting changes in design and systems to meet our customers' needs in escalations and new requirements. Furthermore, you will be part of a highly trained Outage Team responsible for the immediate recovery of cellular systems in outage situations.

These responsibilities cover a wide range of products including AXE, OSS, Jambaal, AP, CDPD and all other products supported by TAC.

Ideally you are an experienced Engineer, who has acquired a good understanding of the TDMA or GSM standard and the CMS88, or CMS40 product line. You have gained experience in the AXE-10, OSS and/or AP systems coupled with some experience dealing with corporate customers, and an overall knowledge of the Ericsson business.

Come see why Ericsson Canada is the place to be, and gain valuable exposure to the telecom business world.

**Application:** mailto:lmc.lmcmla@memo.ericsson.se, Gad.Bensoussan@Ericsson.com Gad Bensoussan TAC-1, Customer Interface Manager Ericsson Research Canada, Montreal

### Ericsson Communications Canada

### DATA TRANSCRIPT SPECIALIST

● The Toronto Switch Implementation Department is looking for an experienced Data Transcript Specialist to complement and assist in the development of our team of highly skilled professionals. We need a person who is experienced in mobile system data production and a real team player. The person should have 2 to 3 years experience with Ericsson mobile system data transcript production and is trained on the CME 20 or CMS 40 systems.

Job Requirements: Degree in Engineering, Computer Science or equivalent work experience 2 to 3 years Ericsson mobile system data transcript production Trained on CME20 or CMS40 systems Good knowledge of traffic data and routing Ability to think critically and make accurate and sound decisions A team player able

to assist in the skill expansion of other department members. Excellent customer service and communication skills Good command of the English language

Job Description: Prepare Data Transcript packages, which will support the customer routing requirements and effectively use the AXE switching capacity. Attends/conducts customer meeting to identify and evaluate customer requirements. Participates in project status and scheduling meetings to ensure proper coordination of Data Transcript activities with overall project requirements. Provides DT trouble resolution as required Provides leadership for research and implementation of new products and CNA's Assist with the training of Data Transcript Specialist - level 1.

**Contact:** Shaun Lavery Supervisor, Data Transcript Tel: +1 905 629-6930 Fax: +1 905 206-7460 Email:Shaun.Lavery@emc.ericsson.se

### Ericsson Czech Republic

#### MAKE PRAGUE HAPPEN

The Czech Republic will in few months issue its third GSM licence. Ericsson has a well established Market Unit with headquarters in Prague, a good name in the market but has not supplied any of the present GSM networks. Therefore we are well positioned and eager to become supplier of this upcoming third GSM. And the country really needs an Ericsson system. To pursue this high priority opportunity we have started roll out preparations in anticipation of the licence.

For this we need hungry and experienced new colleagues to work within the GSM 1800 New Account organisation in our Czech Market unit. Take that challenge and join our team in the beautiful city in the heart of Europe

### GSM - ACCOUNT TECHNICAL MANAGER

● As the Technical Manager for our key account you will create total solutions that surpass one of our key prospect's high technical expectations. You will be a part of the GSM 1800 New Account organisation, and exploit all of Ericsson's product and implementation advantages over our competitors to position the account to win the licence and to bypass the incumbents on the Czech market. To do this you need to use all your GSM experience, creativity, and team-working ability. The concrete work consists of investigations, technical co-ordination, brainstorming, professional presentations, offers and a contract specification.

The first tool to handle this is the streamlined fast organisation with only smart people. The second tool is a solid support from ERA Stockholm. The third tool is your talent and time.

### GSM - MARKETING AND BID MANAGER

● As the Marketing Manager you will surpass one of our key prospect's high expectations. You will be a part of the GSM 1800 New Account organisation, and lead the marketing Core 3 team towards the customer account through the pre-license, bid and negotiation phases. Through excellent customer and internal contacts you will organise, motivate and together with the Core 3 create top quality customer solutions. The team is responsible for consolidated bottom line. The function includes leadership and work for the completion of market plans, complex offers, contracts, and forecasts.

The first tool to handle this is the streamlined fast organisation with only smart people. The second tool is a solid infrastructure and support from RMOG. The third tool is your result orientation and self-motivation.

To be successful you need to be a proactive, experienced, and team-working human. You have a M.Sc. or equivalent with at least five years working experience and desirably four of those years within cellular infrastructure. Ability to build excellent relations and drive for results.

### GSM - SWITCHING IMPLEMENTATION MANAGER

● As the Switching Implementation Manager you will take secure the organisation, speed, and quality of the implementation of the switching nodes. You will be a part of the GSM 1800 New Account organisation, and exploit all of Ericsson's product and implementation advantages over our competitors to position the account to win the license and to provide services of the highest quality on the Czech market. To do this you need to use all your GSM implementation experience, creativity, and team-working ability. The concrete work consists of project planning, leadership, professional presentations, offers and a contract specification.

The first tool to handle this is the streamlined fast organisation with only smart people. The second tool is a solid support from ERA Stockholm. The third tool is your experience and entrepreneurship.

### GSM - CELLPLANNING MANAGER

● We have today a few cellplanners. Now we need one more who also can lead the other cellplanners. Your interfaces will be the Transmission Planning, Site Acquisition, and possibly also the BTS engineering groups. You will be a part of the GSM 1800 New Account organisation, and lead the cell planning part of the market operation activities through the pre-licence,

bid and negotiations phases. Through excellent customer and internal contacts you will organise, motivate and work.

Therefore you need to have experience from advanced cellular networks.

The tool you get to handle this is streamlined fast organisation with only smart people. Your contribution comes through result orientation, self-motivation, and experience. Applicant should be able to start by the 10th of April.

### GSM – SITE ACQUISITION CONTROLLER

● The responsibility for our Site Acquisition controllers is to represent Ericsson towards our site acquisition subcontractors. The tasks include education of these subcontractors, controlling the progress and quality of their work, and in the longer term evaluate their performance. You should be prepared to work hard all over the Czech Republic.

To have a chance to reach our targets you should have experience of the above, finding BTS site candidates, and lease contract negotiations.

Successful candidates for all positions above need to be a proactive, experienced, and teamworking. At least five years working experience in relevant fields is desirable. An ability to build excellent relations and drive for results will be essential within your work.

Whatever you know today, you will learn something

**Contact:** ECZ/RC Andre Grce +420 2 6119 4339  
Application: Ericsson Czech Republic spol. s r.o.  
ECZ/HC Martina Huitfeldt U michelske skoly 10 140 00  
Prague 4 martina.huitfeldt@sea.ericsson.se

### Ericsson Telecommunications Pte Ltd, TDMA Systems Asia-Pacific, Singapore

#### TDMA/EDGE/3G LOBBYIST

● You like to be challenged? The Asia-Pacific Task Force for TDMA systems covers an area of over 13 countries, from Pakistan down to Australia / New Zealand. We are working together in a team of highly professional individuals covering different areas, like: marketing & sales, business consulting, business development, marketing communications and TDMA/EDGE/3G lobbying.

For the area of TDMA/EDGE/3G lobbying we are looking for 2-3 experienced individuals who want to join our team and are not afraid to take up a challenge. The challenge is: establish TDMA/EDGE/3G as the preferred technology for Asian operators in the 800- and 1900 Mhz band.

Your main tasks will be: Plan, together with the other members of the team and the local companies, to perform presentations, discussions and other TDMA/EDGE/3G lobbying activities towards operators, government bodies, investors, analysts and media. Maintain up-to-date information on the latest global developments in the area of TDMA, EDGE and 3G. Monitor progress on the different markets in the region, and if required take actions, to ensure that we meet our goal of establishing TDMA/EDGE/3G as the preferred standard in the Asia-Pacific. Maintain a close cooperation with the TDMA interest group UWCC. Actively work together with the corporate TDMA lobby group.

If you are the person we are looking for, you should have the following profile: MSc in Electrical Engineering or in Physics or equivalent education. At least 5 years experience with Mobile Systems. Excellent knowledge of the TDMA standard and the wide range of applications supported by this standard. Good understanding of the Ericsson 3G evolution path: EDGE/UWC-136 and W-CDMA. Excellent presentation skills. Extensive experience from meetings with the senior management of operators and government bodies. Experience with media relations. Team player and flexible attitude.

Do you fit this profile and you are interested to take up the challenge? Please respond to us by sending your CV to the e-mail address specified below (subject: job application), contact us or visit our homepage <http://enoweb.eno.ericsson.se/rmoa> for further information.

**Contact:** Aart Houweling Manager TDMA/EDGE/3G  
Lobbying Asia-Pacific (acting) Business Phone:  
+65.3501 668 Hand Phone: +65.96624359 E-mail:  
aart.houweling@eno.ericsson.se or Urban Gillström  
Regional Director Asia-Pacific TDMA systems Business  
Phone: +65.3501 350 Hand Phone: +65.96583041

### Ericsson Eurolab Germany, Research & Development Mobile Communications Location Nürnberg, Product Development Transcoder

We are looking for

#### 2 SW - ENGINEERS

● Your main responsibilities will be: The development of a new emulation environment to be used for the verification of our products. Furthermore you will support the maintenance of the existing tool environment and Support newcomers in using SW engineering methods in future development projects.

Your profile: For this position we are expecting a Bachelor/Master in Computer Science and at least 2 years of experience in programming. You are expert in OOD, C, C++ or Java and you have experience in Unix and Windows operating systems. Knowledge in telecommunication and GSM would be appreciated.

You need to bring initiative, very good communication and cooperation skills. We are expect cultural aware-

ness sufficient to develop and maintain a contact network within and outside Ericsson.

**Contact:** Manager Human Resources Norbert Lechner  
Dial: +49 911 5217-111 E-mail:  
Norbert.Lechner@eedn.ericsson.se Department  
Manager Hans Larsson Dial: +49 911 5217-355 E-mail:  
Hans.Larsson@eedn.ericsson.se Group Manager  
Patricia Spitz-Lehmann Dial: +49 911 5217-317 E-  
mail:Patricia.Spitz@eedn.ericsson.se

### Ericsson Telecommunicatie B.V., Rijen, The Netherlands

#### TECHNICAL SUPPORT ENGINEER

The Global Response Center (GRC) is located in three different timezones throughout the world (The Netherlands, United States and Australia). The GRC is the responsible for the 2nd line services towards other Ericsson companies. CSR's and other service requests are handled by the GRC or passed through Marketing or Design. To deliver the technical services requested, we are looking for additional engineers to join our team in Rijen, The Netherlands.

● Key responsibilities: The Technical Support Engineer is responsible for solving technical problems for products based on the PN-product range. This means recovery of outages, making corrections, making emergency corrections, writing trouble reports, route cause analysis, analysing restart and dumps. He or she manages the problems and if necessary takes care of the translation and communication between Ericsson and the customer.

The task also includes checking the Customer Service Requests (CSR's) which are made, monitoring the follow-up of support requests by the customer at the Front Office and the follow-up by Design.

Qualifications: A good knowledge of AXE (APT, APZ or IO) and at least three years experience as Technical Support Engineer, Trouble Shooter or equivalent level. You should be innovative, flexible and tolerate stress well. As we have a lot of male engineers we would like to invite female engineers to participate in this opportunity.

**Contact/Application:** Loet Pessers or Andy Hallett  
Department GRC-EU Ericsson Telecommunicatie b.v.  
P.O.Box 8, 5120 AA Rijen The Netherlands Tel.  
+31.161.249200, Fax. +31.161.249374, Mob.  
+31.6.55303088 Email: mailto:Loet.Pessers@etm.ericsson.se Internet: <http://www.ericsson.se>

### Guangdong Ericsson Telecom Engineering Company Ltd, Guangzhou, Peoples Republic of China

#### SENIOR SUPPORT ENGINEER NETWORK SUPPORT

The Network Support Division at GUC is responsible for delivering high class services and supplies to the region. Currently we supply 2nd line support to our main customers incorporating more than 400 switches.

● The position will be placed at GUC in Guangzhou but travelling within the region should be expected.  
Duration of assignment is 1 year.

Job Description: You will play an active role in providing support and advice to the local engineers and build up the local competence and also be a member of the divisional staff pool. Solving problems reported from the customer network (Transgate 3, FMP3, later application systems and to some extent GSM related questions). Play an active role in the staff pool. Participation in customer meetings to discuss technical solutions and problems. This requires close relationship and frequent interaction with the customer. Anticipating new functions to be introduced to the network and assisting in the successful conclusion of customer acceptance tests.

Competence requirements: 5+ years experience in an AXE environment in either testing or support. Software troubleshooting skills. Exceptional AXE knowledge in 2 or more specific areas (e.g. ISDN, signalling, IN, GSM). Good GAS process understanding and knowledge of tools used. Ability to transfer knowledge. Strong communication skills. Good command of written and spoken English. Willingness to travel within the region.

**Contact:** Bengt Froberg - Support Manager BN, Memo:  
ETC.GUCBF e-mail: [bengt.froberg@guc.ericsson.se](mailto:bengt.froberg@guc.ericsson.se) or  
Annie Jiang - Human Resource Manager, Memo:

ETC.GUCJIAN Application: Sharon Yuan - HR, Memo:  
ETC.GUCSHYU Telephone GUC office: + 86 20 8553  
8868

**Ericsson Switzerland (Bern) is supplying Swisscom  
Mobile with ND/NPI (Network Design/Network  
Performance Improvement) services. We are now  
looking for a**

#### MANAGER RADIO NETWORK ENGINEERING, SWITZERLAND

● As a Manager over the Radio Network Engineering group you will be leading a young, flexible, and self directed team of 15 engineers. The team is mainly working with ND/NPI (Network Design/Network Performance Improvement) services towards Swisscom Mobile, but assignments outside Switzerland are also performed.

Technical Competencies/experiences - well proven technical experience in the field of ND/NPI as well as international experience, preferably from a similar position. The job is putting high demands on you as an engineer, since you will face the customer in many technical discussions.

Human Competencies - leadership skills, team building and motivation to succeed, good communication and presentation skills to facilitate customer facing role, relationship building and selling competence. Fluency in English and German or French is needed.

We are offering you a dynamic job in a demanding environment with excellent career opportunities.

**Contact:** Carl Aspenberg Telephone: +41 - 31 - 9983  
572 Mobile: +41 - 79 - 3000 379 email:  
Carl.Aspenberg@Application: Elisabetha Lederm, Iler  
Ruchstuckstrasse 21 8306 Br, ttisellen Switzerland  
eas.ericsson.se

### Saudi Ericsson Communications Co. Ltd., Riyadh- Saudi Arabia

#### MD 110 PRODUCT MARKETING MANAGER

Saudi Ericsson is a well-established local company with the management responsibility vested in Ericsson

## Telefonaktiebolaget LM Ericsson HF/LME/I - Communications Shared Services

### MANAGER

# Ericsson Events

*Ericsson Events is a sub-unit of the corporate support unit Communications Shared Services.*

*The Events group has responsibility for leading corporate exhibition, conference and special event projects, and currently consists of nine project leaders and project managers working with activities globally.*

We're now recruiting a new manager for this sub-unit, an individual who's primary focus will be to capitalize on existing competencies, develop new tools and techniques and be a leader in utilizing exhibitions and events as part of a total corporate communications program.

Very well developed communication skills are a requirement, as well as the desire to build relationships across personal, business and international borders.

In order to be considered for this position you should have a university degree plus long (10 years) experience in marketing/ marketing communications and brand development. Management experience is required, and your background should include working with large, definite deadline projects. Experience with exhibitions and events is a plus.

You should have excellent English and Swedish language skills (written and spoken). Your responsibilities will include working with Brand and Marketing Communications/Information managers around the world. Excellent knowledge of Ericsson and a well developed internal network is expected.

Regular travel is required. You need to be flexible, willing to take risks, comfortable with negotiating internal and external contracts, and most of all enthusiastic about leading a professional team dedicated to increasing Ericsson's image through high quality communication activities.

Please call Lynne Howell Wiklander, Manager Communications Shared Services, if you would like additional information, 08 - 719 91 74, email: [lynne.howell-wiklander@lme.ericsson.se](mailto:lynne.howell-wiklander@lme.ericsson.se)

**Send your application to:**  
Telefonaktiebolaget LM Ericsson  
HF/LME/P Mats Bjerlov  
126 25 STOCKHOLM  
Email: [mats.bjerlov@lme.ericsson.se](mailto:mats.bjerlov@lme.ericsson.se)

# If you had the freedom to create the perfect job, what would it look like ?

AMC and part of PN switching merged to CAPC. The Core Product Unit Application Core (CAPC) is responsible for providing transit switching and network access functionality commonly used by all Ericsson's wireless and wireline systems and is heavily involved in system innovation initiatives. CAPC is headed from EED, Herzogenrath/Aachen and consists of CAPC Management, CAPC International Operations, TCS Design and CAPC Verification. For further support of our teams we are looking for a

## Department Manager Product Management

Project-No.: 18/399

The CAPC Product Management Department is responsible for the product management of the transit switching and network access products that are common for many of Ericsson's AXE based systems, both for wireline and wireless systems. This responsibility includes activities such as business opportunity tracing, product portfolio management and positioning, project cost follow up, product decisions including prioritisation, road map planning, product agreements with other product units, toll gate assessments, supervision of requirements, arrangements of product planning meetings etc.. Present challenges are ATM backbone solutions for the Universal Mobile Telecommunication System (UMTS) and the Next Generation Switch (NGS).

As Manager for CAPC product management you will have a team of product managers working with you. It is the responsibility of this team to define application core deliveries that maximise Ericsson's profit and aligns with the group's overall strategy. Travelling will be a natural part of the job. To strengthen our international operations we are looking for an experienced Manager with more than 7 years of telecommunication experience.

Please contact:

CAPC International Operations

Ulf Henell, eedugh@eed.ericsson.se, +49.2407.575-256

Ola Melander, eedome@eed.ericsson.se, +49.2407.575-255

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

## CAPC Project Manager NGS Feasibility and Development

Project-No.: 13/399

The CAPC project office has a dynamic group of overall project managers and administrators, managing key projects at the core of all applications. These projects encompass subprojects and associated projects in the Netherlands, USA, Ireland, Finland, Sweden, Norway, England, Spain, Italy, Germany, Denmark, Australia, Mexico, Croatia, Brasil and Greece covering a vast range of development areas at the leading edge of technology.

Requirements: Degree of Engineering with specialisation in telecommunications or equivalent. At least four years work experience in technical aspects of telecommunication. Three years proven experience in project management. Good knowledge of PROPS, project planning, budgeting and management methods. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skill and good ability to work under pressure are important personal qualities. Travelling is a natural part of the job.

The main task will be to lead a large telephone system project (Next Generation Switch) with full responsibility for fulfillment of Ericsson's commitments to customers.

Please contact:

Project Office

Imo Freese, eediwf@eed.ericsson.se, +49.2407.575-469

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

## PC-APT Chairmen

Project-No.: 14/399

The CAPC systems groups are responsible for the system development of the transit and network access products that are common for many of Ericsson's AXE based systems, both for wireline and wireless systems. This responsibility includes activities such as running product committees, handling overall technical coordination in the CAPC projects, perform system studies and source system design. Present challenges are system work for ATM backbone solutions for the Universal Mobile Telecommunication System (UMTS) and the Next Generation Switch (NGS).

CAPC is responsible for running two PC-APT forums. PC-C/APT 210 25 is responsible for functional allocation and interfaces between XSS subsystems owned by CAPC and towards the mobile access subsystems. PC-APT 210 18 is responsible for the functional allocation and interfaces between fixed XSS subsystems owned by CAPC and towards the fixed access subsystems. An important task for these two forums is to find synergies and identify core application solutions between wireline and wireless systems.

Other important tasks for PC-APT are to maintain XSS (APT) system properties and structure, ensure that uniform solutions are implemented in XSS, handle allocation of functionality to products, act as a decision making body when a number of PC-ANTs can not come to a common decision and to handle allocation of functionality to products.

To each one of these two PC-APT forums, we are looking for an AXE systems designer or software designer with at least 4 years experience, who is interested in leading and driving an inspection forum. As a suitable candidate you have good communication and cooperation skills and are able to understand complex technical problems.

Please contact:

CAPC Systems

Kristina Martelius, eednka@eed.ericsson.se, +49.2407.575-692

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

## Systems Designers

Project-No.: 17/399

As CAPC systems designer you will perform system studies or design before or in early phases of our CAPC main projects. An important aspect is to find synergies and identify core application solutions between wireline and wireless systems. The type of tasks requires that you can work independently or in teams, take initiative and drive for progress.

To strengthen our capabilities for this type of systems work, we are looking for experienced systems designers with more than 3 years of Ericsson experience in AXE10 design. We are particularly interested in people who can provide significant competence in one or more of the following areas: ATM, TCP/IP, AM system development, signalling and protocols, data communication, intelligent networks and O&M.

Please contact:

CAPC Systems

Kristina Martelius, eednka@eed.ericsson.se, +49.2407.575-692

Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

## Technical Coordinator for NGS3 Project-No.: 16/399

The CAPC NGS3 project technical coordinator coordinates technical issues involving several subprojects, the related wireline application projects and associated projects within the wireline and data networks systems. The CAPC main technical coordinator also supports the subproject technical coordinators.

To strengthen our capabilities within technical coordination, we are looking for an experienced system designer with more than 4 years of Ericsson experience in AXE10 design. As a technical coordinator on main level, you should have competence in one or more of the following areas: AM system development, signalling, data communication, ATM, O&M, resource modules, IN development or hardware modernisation.

Please contact:

CAPC Systems

Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163

## Technical Coordinator AMC Phase 7 Project-No.: 15/399

The AMC Phase 7 project technical coordinator coordinates technical issues involving several subprojects, the related mobile applications projects and associated projects within the UMTS, CME20, CMS30, CMS40, CMS88 and CMS99 systems. The CAPC main technical coordinator also supports the subprojects technical coordinators.

To strengthen our capabilities within technical coordination, we are looking for an experienced system designer with more than 4 years of Ericsson experience in AXE10 design. As a technical coordinator on main level, you should have competence in one or more of the following areas: AM system development, signalling and protocols, data communication, ATM, O&M, resource modules, IN development, UMTS or hardware modernisation.

Please contact:

CAPC Systems

Gert Wallin, eedgew@eed.ericsson.se, +49.2407.575-8058

Human Resources

Simon Seebass, eedsims@eed.ericsson.se, +49.2407.575-163



# Make yourself heard.

**ERICSSON**

group, represents the full range of systems, products and services from the Ericsson group.

The company is engaged in the prime activities involving consultancy, supply, installation and maintenance of advanced wired and mobile, voice and data telecommunication networks, PABXs and Business Phones for both private and public sector. The other marketing activities include distribution and supply of GSM terminals, accessories and various consumer products via dealers' network.

● We are currently looking for a "MD 110 Product Marketing Manager" on a 12-months long-term assignment at our office in Riyadh, Saudi Arabia.

The position reports to the Marketing & Logistics Director for Private Market at Saudi Ericsson.

Main Responsibilities include: active participation in the formulation and execution of marketing strategies for Medium & Large Communication Systems; product cycle management; pre-sales technical support; and pre-sales solution and integration support.

Requirements: The successful candidate should have a minimum of 5 years experience in MD 110 product support. Should have strong communication and presentation skills. Should also be a team player, self-starter, and possess good analytical approach to problem solving. Fluency in English is a must.

**Contact:** Ramez Dandan, Marketing & Logistics Director +966 1 478 5800 Ext.564 SES.SESRADAN or HR Contact: Mohammad Yousuf +966 1 478 5800 Ext.560 TKS.TKSMY

**Ericsson de Bolivia Telecomunicaciones S.A.**

### SYSTEM SUPPORT MANAGER

An important part of our business in Bolivia is the support services that we perform for our network operator customers. The systems they operate are mainly cellular TDMA but also PSTN and RWLL systems.

● Ericsson Bolivia is recruiting a manager to the system support group. The responsibilities include management and development of the support organization and the constant improvement of our support service offerings. Our objectives are an increased customer satisfaction and a growing business volume for customer services.

The qualities required for the position: ability to build and manage strong customer relationships, proven leadership skills and a good technical knowledge. The candidate should have a minimum of 3 years experience of system support for cellular systems and be familiar with the work processes and tools available. Fluency in English is required. Knowledge of Spanish or Italian is a strong advantage.

Ericsson de Bolivia offers a long term expatriate contract with location in La Paz, an interesting and safe place for candidates with or without accompanying family.

**Contact:** Peter Holmertz, Customer Services Manager, e-mail: PETER.HOLMERTZ@ERICSSON.COM Application latest 990409: Ericsson de Bolivia Telecomunicaciones S.A. Casilla de Correos No 648 La Paz, Bolivia. Tel: +591 2 312233, Fax: +591 8 112279 Eva Moberg Vargas, HR Manager, e-mail: EBB.EBBEVA@MEMO-USA.ERICSSON.SE

**Ericsson Eurolab Deutschland GmbH, Herzogenrath/Aachen, Germany**

### RESOURCE/COMPETENCE MANGER

The EED/X/P department is responsible for 1/APT products, the design of the Mobile Switching Subsystem (MSS) within the Circuit Switching System House (CSS) as well as Function Test and Maintenance for the designed products in MSS

● As a Resource/Competence Manager you are part of the management team consisting of Frame, Operations, Resource/Competence Manager and Department Manager. You are responsible for 25-30 individuals from different disciplines within the department.

As a Resource/Competence Manager your main tasks are to monitor market and technology development to identify future competence demands, develop people to meet business demands, do resource planning and resource contracts with the projects, recruitment, appraisal and salary setting, be part of the assignment board and stay in touch with the ongoing operations.

You should have a strong interest in people and some leadership experience, a refined sense for picking up signals and a good communication.

**Contact:** Human Resources Simon Seebass EED.EEDSIMS +49 2407 575 163 or EED/X/PC Arthur Sliepen EED.EEDARS +49 2407 575 141

### SYSTEM ENGINEERS (CSS)

#### MIGRATION FROM GSM TO THE FUTURE

● We are working in the area of GSM 900, 1800, 1900 and UMTS systems. We are looking for people that want to become system architect, technical coordinator or take a leading role in the forefront of mobile telecom evolution. You directly control the next version of Ericsson's products in the mobile world market.

Suitable candidates have proven experience in on or more of the following areas: O&M, CORBA, network

management systems, middleware, telecom/real time operating systems, ATM protocols. In addition you are team and result oriented, take initiative and have good self motivation.

You should enjoy to work on an entrepreneurial basis and have the ability to set priorities right within an ever changing environment. Opportunities for travel, networking and personal and technical development are outstanding.

Please refer to our homepage: <http://www.eed.ericsson.se/services/eed-x-d/Welcome.html>

**Contact:** Per Ljungberg, +49.2407.575-609, eedplj@eed.ericsson.se Frank Adelhard +49.2407.575-287, eedfad@eed.ericsson.se HR: Simon Seebass +49.2407.575-163, eedsims@eed.ericsson.se

### SOFTWARE DESIGN ENGINEERS (CSS)

● We are working with the GSM-system in the area of the MSS, dealing with the design, development and test of telecom software or design complete telecom systems. Programming experience e. g. (C++, C), background in telecommunications preferred with a working knowledge of structural design methods is required for this position. Relevant Ericsson experience is a plus.

If you are interested in joining a young and international team and you have good communication as well as good interpersonal skills.

**Contact:** Human Resources EED/H/R Simon Seebass Dial: +49 2407 575 163 Memo: EED.EEDSIMS Design Department: Gina Roge, Dial: +49 2407 575 254, Memo: EED.EEDGINA or Dave Hendersson, Dial: +49 2407 575 630, Memo: EED.EEDDHE

### SITE TEST ENGINEER (CSS)

● The position is located in the CME 20 SS STE Support Group under TCM. The group is responsible for supporting STE activities within CSS and CAPC in the area of function test, design maintenance and longer term Methods&Tools issues affecting testing. This central STE support group will not only support EED but also other LDC's that perform CME20 SS related test and maintenance activities.

As a suitable candidate, you have experience in AXE function testing or design maintenance. Experience with MGTS PASM, TSS 2000, TTCN and C coding is of added value. You also have to be service minded and prepared to quickly take new assignments.

In this position you will have the opportunity to travel, perform new tools evaluations, come up with new testing strategies and increase your network throughout Ericsson.

**Contact:** Human Resources Simon Seebass +49 2407 575 163 Memo: EED.EEDSIMS or EED/X/SOZC Raymond Meertens +49 2407 575 470 Memo: EED.EE-DRAMO

### GPRS SYSTEM TESTERS

● The X/ST section takes the responsibility for the GPRS Indus Project, FRIGG1 being the first main release.

The GPRS System Testers are mainly responsible for planning, implementing and executing Industrialisation tests needed to integrate and verify the new functionality on node level as well as on GSM network level.

Further activities are to issue and follow up requirements for test configuration and simulation tools and to build up competence in order to strengthen EED's competence in this area.

As a suitable candidate you have a profound testing experience and an interest in a challenging project where almost everything is new - new technology, new interfaces, new tools etc. In this position you will need strong analytical and communication skills as well as a very good knowledge of general telecommunications, GSM system and GPRS interfaces.

Experience with test/debugging of software in a Unix environment (C, Erlang), data communication and BSC experience is a clear advantage.

You will have to be flexible, team oriented and able to work under pressure.

**Contact:** Human Resources Simon Seebass +49 2407 575 163 EED.EEDSIMS or EED/X/STC Klaus Boeckers +49 2407 575 181 EED.EEDKLB

### SENIOR PRODUCT LINE MAINTENANCE TESTER GLOBAL SUPPORT FOR No.1 AXE APPLICATION

● The product line maintenance section at EED, Herzogenrath, Germany, takes central responsibility for the worldwide CME20 switching systems. It is considered as the primary competence center for CME20 SS.

Within CME20 SS we assume full responsibility for assembly, verification, implementation, FOA support and release of intermediate CN-G packages, Rapid Product Changes and DTI/GIWU software packages. We are the central development organisation for local and remote upgrade methods. Here our focus will be to create and verify automated upgrade, update and testing procedures.

You have at least 3 years of testing experience in AXE mobile switching, systems maintenance or support organisation, sound background in AXE test environment handling and IOG/APZ operation and maintenance.

You have ASR competence, like to drive improve

ment and change, are effective in teamwork and are prepared to coach less experienced colleagues.

Opportunities for travel, networking, personal and technical development are outstanding.

**Contact:** Elke Busch, +49.2407.575-357, memo: EED.EEDELBR HR: Simon Seebass, +49.2407.575-163, MEMO EED.EEDSIMS

### EXPERIENCED TROUBLE SHOOTERS FOR GLOBAL SUPPORT OF THE No.1 AXE APPLICATION

● The Product Line Maintenance section takes central responsibility for the worldwide CME20 Switching System. It is considered as a primary competence center for CME20 SS.

Our strong resources reflect our responsibility for troubleshooting and testing on system level. Your contribution to the Help Desk team is excellent testing and trouble shooting experience in mobile AXE switching systems and their latest developments, commitment to provide solutions to our customers and team spirit. Develop your skills and develop your future with the CME20 Switching System Product Line Maintenance team. Opportunities for travelling, networking, personal and technical development are outstanding. Watch yourself make a global impact with your efforts.

**Contact:** Human Resources Simon Seebass EED.EEDSIMS +49.2407.575-163 or EED/X/SL Russell Hegg EED.EEDRUH +49.2407.575-668

### CORE PRODUCT UNIT APPLICATION CORE (CAPC)

AMC and part of PN switching merged to CAPC. We are responsible for providing transit switching and network access functionality commonly used by all Ericsson's wireless and wireline systems and are heavily involved in system innovation initiatives.

### SYSTEM MAINTENANCE ENGINEERS (CAPC)

● Your main authorities and tasks are to perform analysis of complex system faults and find a solutions to these fault. This may involve travel to the customer sites, which can be in any country where CAPC is in use. You would be expected to have knowledge in at least one mobile application system, and a broad AXE knowledge, detailed knowledge in at least two sub-systems is

advantageous. You are expected to learn and develop across all the mobile applications. Key words on your personality, would be pro-active, self-initiative, outgoing, and result oriented. You would also be goal oriented and willing to share knowledge with others.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Experiences from System Verification/Test are a clear advantage.

### SYSTEM TEST ENGINEERS (CAPC)

● Your main authorities and tasks are to perform System Integration Test of CAPC products. This includes activities like Load test, Stability test, Robustness test and Accuracy test. Main areas are today IN, Datacom and ISDN. You will work with the definition and execution of SIT as well as trouble shooting on the faults found.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Experiences from System Verification/Test are a clear advantage.

The TEST unit will have as main responsibilities to perform verification of the CAPC product components and have an active role in CAPC customer support activities. The unit will furthermore also be responsible for verification project both on main (CAPC) as well as sub-project level. These projects perform in an international and intra-culture environment and is covering a vast range of development areas at the leading edge of technology, such as IS DN, IN and Internet accesses. To strengthen our activities we are looking for

### SYSTEM TEST LEADER (CAPC)

● Your main authorities and tasks are to plan, coordinate and follow-up of System Integration test activities in the Overall CAPC projects. Furthermore you will also be the interface towards associated verification projects in project related matters and of course you will coach the team.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation, skills. The ability to work under pressure is also an important personal quality. Furthermore, fluency in written and spoken English is required. You should be familiar with System Verification/Test and/or Customer Support. Previous managerial experience, e.g. as Projectleader/Testleader is a clear advantage.

**Would you like to switch jobs with somebody in Ericsson who does similar work in another country?**

**This project is tailor-made for you**

Ericsson Radio, S.A. Indelec Division, located in Zamudio (Vizcaya), is taking a very active role in the development of GSM Phones for Special Applications and therefore we are looking for the following highly qualified personnel to join this project:

**Software Engineers  
Verification Engineers  
Hardware Engineers  
Mechanics Engineers  
Project Manager  
Systems Engineers**

**Please, send your application with a CV and photo to:**

Sergio Ezama (INE.INESEM)  
ERICSSON RADIO S.A., INDELEC DIVISION,  
Human Resources,  
Parque Tecnológico 108. 48170 Zamudio (Spain)

**For further information visit us in:**

<http://www.sparrow.ericsson.se/hrr/exchanges>

**Contact:** Human Resources Simon Seebass Memo-Id:EED.EEDSIMS Dial: +49 2407 575 163 or EED/U/TVC Karl-Heinz Welter Memo-Id.:EED.EEDKHW Dial: +49 2407 575 286

*The border between Telecommunication and Datacommunication is becoming more and more diffuse. CAPC needs to strengthen the competence in the datacom area focusing especially on Mobile interworking and TCP/IP. We need a person who can represent CAPC on the system level and who can contribute to the evolution of datacom within AXE10.*

● Your job would be to perform datacom system studies, investigations and to develop datacom strategies. Some of the results could then be objects for prototyping in a lab environment. You will cooperate with colleagues within the Mobile Applications, PN and UAB. We are looking for a system or software engineer with at least 4 years of Ericsson experience, preferable TCP/IP and/or mobile Datacom experience.

**Contact:** Human Resources Simon Seebass Dial: 02407/575-163 Memo: EED.EEDSIMS or Groupleader EED/U/OR Gert Wallin Dial:02407/575-8058 Memo:EED.EEDGEW

## CAPC PROJECT MANAGER

● The CAPC project office has a dynamic group managing key projects at the core of all applications. These overall projects encompass subprojects and associated projects in the Netherlands, USA, Ireland, Finland, France, Mexico, Brasil, Canada, Croatia, Denmark, Sweden, Norway, England, Spain, Italy, Germany and Greece covering a vast range of development areas at the leading edge of technology. Your task will be leading a large mobile telephone system project with full responsibility for fulfillment to our customer.

Requirements: Degree in Engineering with specialisation in telecommunications or equivalent. At least four years work experience in technical aspects of telecommunications. Three years of proven experience in project management and good knowledge of PROPS, project planning, budgeting and management methods. Good knowledge of mobile systems and Ericsson business practices would be an advantage. Travelling is a natural part of the job.

**Contact:** Human Resources Simon Seebass EED.EED-SIMS +49.2407.575-163 or EED/U/OPC Imo Freese EED.EEDIWF +49.2407.575-469

## PROCESS ENGINEER PROJECT (CAPC)

● We are creating CAPS's software design environment of the future. This includes the evaluation and specification of new internal and external tools. We are looking for people who like to push the development and enhancement of the methods, processes and tools for system 108, which will be introduced for UMTS. You are responsible for the engineering of our future software design methods & tools and support their introduction into our development projects.

As a suitable candidate you should have at least two years of software design or process engineering experience. You should enjoy to work with process management in an international organisation and see this job as a challenge to establish a world class environment for our design and test activities. This job implies the opportunity to travel.

**Contact:** Human Resources Simon Seebass EED.EED-SIMS +49 2407 575 163 or Manager Methods&Quality Andreas Bleeke EED.EEDANB +49 2407 575 394

## GENERAL PACKET RADIO SERVICES (GPRS) EED/D

*The Systemhouse GPRS (General Packet Radio Services) is responsible for the development, verification, support and supply of products in the field of GPRS. GPRS is aiming for the combination of data communication and mobility. GPRS is currently standardized as an extension of GSM. The department EED/D is responsible for the development and maintenance of the GPRS core systems OMS and PXM and for the GPRS applications VLR, SMS and PTM. For further support of our teams we are looking for*

## GROUP MANAGER GPRS SYSTEM MANAGEMENT

● Packet switching systems are gaining an increasing attention both within Ericsson organisation as well as on the telecom markets.

The system management group is responsible for standardisation activities, simulations, requirement engineering. Supporting the internal organisation and development projects as well as supporting different customer accounts. The work is performed in close cooperation with Kista and other design organisations.

The group consists of highly skilled and experienced system managers and operative product managers and will further grow during 1999.

Requirement for the position is to have a strong technical background. Experience as group/project manager or team leader is an advantage. A suitable candidate shows distinct ambition to apply his/her leadership skills and to focus on our people. He/she will also become a member of the GPRS management team at EED.

**Contact:** Torbjörn Lundahl +49.2407.575-149, memo: EED.EEDTOLU HR: Simon Seebass +49.2407.575-163, memo: EED.EEDSIMS

## WEB DESIGNER AND CUSTOMER SUPPORT

● In the Application Design Unit in the GPRS System House we develop end user applications for GPRS. The task comprise the design and maintenance of the official product web site including uploading correct software and documentation. One of the first tasks in this area will be to design and implement the customer and user database.

You will take care of trouble report handling which means that you answer TRs and dispatch them within the team. The maintenance of the TR handling tool and the contact to the company who developed the tool belongs also to the field of responsibility.

As an ideal candidate you have a good technical understanding and you are interested in working at the border line between design, configuration management and product administration.

**Contact:** Human Resources Simon Seebass EED.EED-SIMS +49 2407 575 163 or Manager Design Ralf Wellens EED.EEDRAW +49 2407 575 182

## Ericsson Austria AG, Vienna, Austria

## SOLUTION MANAGER, TELECOM MANAGEMENT

● Your responsibilities: As a solution manager within Network Operators at Ericsson Austria you shall give product technical support during marketing, sales, negotiation and after-sales activities. You will be the technical consultant within the local Core-3 team and must therefore have a broad technical knowledge about Telecom Management systems.

You will be responsible for all the co-ordination related to the Telecom Management products, i.e. handling the activities towards the different Product Units for both: a) Network Management systems, such as XMATE, XM, OSS, NMS, Netman etc. b) Customer Care and Billing systems, such as LHS/BCHS, EHPT/InterConnect etc.

Help the customers to get more knowledge about Ericsson's Telecom Management solutions by holding seminars and presentations of new or enhanced products and features will also be a part of the tasks.

In the sales and negotiation phase you shall initiate technical and functional analysis, perform dimensioning, define key selling arguments, as well as supporting the pricing.

You can expect a challenging position working as a part of a team towards a demanding and growing market.

Your experiences & background: Minimum 3 years experience with Ericsson systems for both Mobile and/or Fixed networks. Fluent German and English, as well as good inter-personal skills are requested.

Start preferably as soon as possible

**Contact:** Gerhard Fritze, Solution team responsible, Phone: +43-1-81100 5467 e-mail: gerhard.fritze@sea.ericsson.se Application: Daniela Giovannozzi daniela.giovannozzi@sea.ericsson.se Tel +43 1 811 00 4316 Fax: +43 1 811 00 4310 Ericsson Austria AG Pottendorfer Strasse 25-27 A-1120 Vienna Austria

## Ericsson Austria AG, Vienna, Austria

*A world class challenge in the Alps -*

*For the 4th GSM licence in Austria, roll-out speed is the key to success. Ericsson is in a good position to be the system supplier. This will demand the fastest network roll-out ever performed for a GSM system. It will also include site acquisition and civil works beside the normal implementation and integration of thousands of Radio Base Stations and the Switch sites. Network design and surveys will be performed by Ericsson.*

*We urgently need Customer Project Managers who are willing to take on the challenge and make this project to be a successful one*

## TOTAL PROJECT MANAGER (VIENNA)

● Your responsibilities: Fulfill the scope of work of the total project. Run a project with hundreds of Ericsson employees and several hundreds of external suppliers. Overall responsibility for Site Acquisition, Civil Works, Installation, Integration, Network Design and Surveys. Recruitment of personnel and agreements with external suppliers. Co-ordinate all activities in whole Austria including the different regions.

Your experiences & background: Besides a long experience as a Customer Project Manager with all common experiences needed in such a position we also want you to have: Proven track record of running big and complicated customer projects successfully. Experiences of Site Acquisition and Civil Works. Good command of German language. Excellent managerial skills.

## REGIONAL PROJECT MANAGERS

*(several positions open)*

● Your responsibilities: Total responsibility for all activities in a region. Site Acquisition, Civil Works, Installation and integration for your region. Network Design and surveys for your region. Co-ordinate the activities in your re-

gion with the rest of Austria Recruitment of personnel and agreements with external suppliers

Your experiences & background: Besides a long experience as a Customer Project Manager with all common experiences needed in such a position we also want you to have: Ability to be responsible for a project in a remote regional office. Proven track record of running customer projects successfully. Experiences of Site Acquisition and Civil Works. Good command of German language. Excellent managerial skills.

**Contact:** Nils Torstensson (nils.torstensson@sea.ericsson.se) Tel: +43 664 460 65 28 Marcus Schubert (marcus.schubert@sea.ericsson.se) Tel: +43 664 101 61 78 Application: Daniela Giovannozzi (daniela.giovannozzi@sea.ericsson.se) Tel: +43 1 811 00 4316 Fax: +43 1 811 00 4310 Ericsson Austria AG Pottendorfer Strasse 25-27 A-1120 Vienna Austria

## Ericsson Canada

## TECHNICAL ASSISTANCE SPECIALIST

● The posting is as follows: The Toronto CSO is looking for a Radio Base Station troubleshooter to complement our team of highly skilled professionals supporting our customers in Canada. We need a person who is experienced at troubleshooting in the RBS environment at the PLEX level.

Job Requirement: Degree in Engineering, Engineering technology or science or equivalent work experience. Several years related experience in telecommunications. Working knowledge and understanding of cellular systems. Four years experience with Ericsson or equivalent cellular experience. Trained in CMS-8800 cell site operations and maintenance (experience an asset). Two years experience in RBS troubleshooting a must (Test System' experience a must). Excellent oral and written communication skills.

Job Description: 24 hour @first line' technical/emergency support for CMS88 networks. Preparations of procedure and verification of functionality of functions/correction regardless of complexity. Responsibility to define/verify a new AS. Communicate and assist customer/field personnel in technical and operational questions. Assist in emergency situations to resolve equipment and/or procedure errors. Planning, control and direction of a CAN implementation. Reporting and follow through of customer problems via various software tools. In depth Radio Base Station troubleshooting.

The person should be outgoing with excellent oral and written English skills and be a real team player. If you fit this description and would like to be part of our team here in Canada please submit your CV to the following:

**Contact:** Tim Danks Manager, Customer Support/Organization Ericsson Communications Canada Tel: +1 905 629-6831 Fax: +1 905 629-6945 Email: Tim.Danks@emc.ericsson.se

## Nippon Ericsson K.K., Japan

## AXE SYSTEM EXPERT

● We have one vacant position for an experienced AXE System Expert at our head office in Shin-Yokohama.

Your work tasks will include advanced trouble shooting for International exchanges (Transgate 2), provide technical competence for resolving complex problems in network, provide emergency corrections and technical support to customers, analysis of TR's and participate in the 24h Emergency Service.

We expect that you have at least 6 years working experience in AXE 10 Digital Switching Application Systems as well as good knowledge of APZ/IOG 11, CCITT No 7 signaling/ISUP. It is an advantage if you have knowledge and experience of IN.

You also need to have the ability to transfer your knowledge and skills to our local staff by training them and working with them.

You have to be fluent in spoken as well as in written English.

We presume that you are open-minded, outgoing and that you can easily adapt to a culturally diverse working environment.

We are ready to offer a 1-year contract to the right person and we expect the starting date to be in May, 1999.

**Contact:** Ingvar Feltborg, Customer Support Manager for the group Phone no: +81 45 475 0073 Memoid: NRJ.NRJINF E-mail: ingvar.feltborg@ericsson.co.jp Christer Elmqvist, General Manager, Support Phone no: +81 45 475 0010 Thomas Ahberg, Human Resources Phone no: +81 45 475 0400

## Ericsson Radio Systems, Kista

## PROFESSIONAL SERVICES NEEDS SHORT- AND LONG-TERM CONTRACTORS

*Unique and challenging opportunity to gain invaluable experience by working as a contractor on short- or long-term assignments for Ericsson customers worldwide Professional Services is an Ericsson Business Unit that delivers business solutions and consultancy services to network operators around the globe. We provide expertise in both the commercial and technical aspects of network operations and work in partnership with Local Companies.*

*The Order Office within the Network Management Services product unit is now looking for people to go on*

*contract, that is, multinational assignments at customer projects. Knowledge, skills, and flexibility are basic requirements, however, we are looking for people to match these positions. We are currently expanding our database and are now looking for several categories:*

## NM MANAGER

● Main responsibilities: You will lead and organise the work within the NO&MC to fulfil the targets for the section, governed by the performance levels agreed on with the customer, to ensure that the best practises are used in the work.

Requirements: The successful candidate has a technical education within Telecommunication, Information Technology and Electronics, good knowledge of general telecommunication and mobile telephony system. You have worked 2-3 years as manager for 25 persons. You have the ability to lead and motivate a multinational team and are conscious of responsibility. You also have experience with budgeting and negotiations with customers and suppliers. You should also be fluent in spoken and written English. Other languages may be needed depending on the local requirements.

## SYSTEM TECHNICIAN LEVEL 1 AND 2

● Main responsibilities: You will be responsible for the surveillance of the network and will perform 24 hours surveillance of the whole GSM network by OSS and supervision equipment for MiniLink and DXX.

You will also monitor, analyze and clear all faults reported by these systems and also complaints coming from Customer Care and other operators.

It will be your responsibility to introduce modifications to the systems as specified by work order. You call out the Field Technicians with a work order, when physical intervention in the equipment is needed, and escalate difficult problems to the System Engineers.

Requirements: The successful candidate has basic technical education and experience from Ericsson GSM radio systems, for Level 1 not less than 2 years and for Level 2 not less than 3 - 4 years. Good knowledge in English is required as well as good social- and pedagogical skills.

## SYSTEM ENGINEERS, MSC/HLR/VLR

● Main responsibilities: You will be responsible for all telecommunication systems agreed on with the customer within MSC/HLR/VLR. The modification of existing system routines and creation of new temporary routines are also your responsibility as well as follow up of all software contents of the system.

You will send/receive/follow up with trouble reports sent to the supplier/customer and also prioritize the trouble reports, including incoming TRs from the other system engineers. You will also distribute all new and upgraded documentation in accordance with SW, HW and equipment to Network Surveillance and NFM Manager.

You will offer expert knowledge concerning system problems in MSC/HLR/VLR as well as expert knowledge regarding parameters and configuration, excluding the radio part.

It is also your responsibility to support technical interfaces with external equipment, i.e. SMS, VMS etc and to interpret switch statistical reports like processor load, traffic recording, etc.

Requirements: The successful candidate will have a basic technical education and experience from Ericsson GSM mobile system, as System Technician Level 2 not less than 3 - 4 years. Experience from OSS is required along with good knowledge in English and good analytical ability.

## SYSTEM ENGINEER, SMS/VMS/AUC/

● Main responsibilities: You will be responsible for all telecommunication systems, agreed on with the customer within SMS/VMS/AUC/ including both Ericsson and 3rd part equipment. You are also responsible for the modification of existing system routine creation of new and temporary routines.

You will be responsible for all preventive maintenance of the systems and generate and control switching data as well as support technical interface towards external equipment, i.e. SMS, VMS etc.

Requirements: The successful candidate has a basic technical education and experience from Ericsson GSM mobile system, as System Technician Level 2 not less than 3 - 4 years. Experience from TMOS is required. You should also have good knowledge in English and good analytical ability.

## SYSTEM ENGINEER, IN (INTELLIGENT NETWORK)

● Main responsibilities: You will be responsible for all telecommunication systems agreed on with the customer within IN SSP/SSCP/SCP. The modification of existing system routines and creation of new temporary routines are also your responsibility as well as follow up. You are responsible for all software contents of the system and all IN Services.

You will send/receive/follow up with trouble reports sent to the supplier/customer and handle and follow up all escalated problems. You will also distribute all new and upgraded documentation in accordance with SW, HW and equipment.

You will offer expert knowledge concerning system problems in SSP/SSCP/SCP as well as expert knowledge regarding parameters and configuration excluding the radio part.

You will also prepare system plans for concerned systems.

It is your responsibility to verify data transcripts and installed service modifications sent via change request, produce data transcripts as required (e.g. parameter changes, etc.) and implement changes in IN Service data using Installed Service Modification in SMAS and/or GSA forms. You will also support technical interfaces with external network elements (e.g. SMAS, SDP, MSC etc.)

You will give priority to the trouble reports, which includes the incoming TR from the other system engineers.

Requirements: The successful candidate has basic technical education and experience from Ericsson GSM radio system, as System Technician Level 2 not less than 3 - 4 years. Good knowledge in English and good analytical ability is also required.

### SYSTEM ENGINEER, RADIO (BSS/BSC)

● Main responsibilities: You will be responsible for all telecommunication systems agreed on with the customer within BS and Radio. You are going to offer expert knowledge concerning parameters and configuration of BS and Radio. You will also handle and follow up all escalated BS problems.

Requirements: The successful candidate has a basic technical education and experience from Ericsson GSM mobile system, as System Technician Level 2 not less than 3 - 4 years. Experience from TMOS is also required. You should also have good knowledge in English and good analytical ability.

### SYSTEM ENGINEER, TRANSMISSION

● Main responsibilities: You will be responsible for all transmission systems in the network. You will handle and follow-up reports concerning transmission and transmission equipment. You will also offer expert-knowledge concerning parameters and configuration of the transmission equipment.

As Minilink is used as transmission equipment you have to be very experienced in that area.

Requirements: The successful candidate has a basic technical education and experience from Ericsson GSM mobile system, as System Technician Level 2 not less than 3 - 4 years. Experience from DXX is required. You should also have good knowledge in English and good analytical ability. Knowledge in energy/power is desirable.

### OSS/MMIS/SMAS ADMINISTRATOR

● Main responsibilities: You will be responsible for the OSS, MMIS and SMAS applications. This includes supporting advanced troubleshooting in the OSS/MMIS/SMAS applications. You will also work with

report systems, application problems and follow up all trouble reports concerning the OSS/MMIS/SMAS supplier.

You will be responsible for the modification of existing OSS/MMIS/SMAS routines, creation of new and temporary routines as well as follow up.

You will handle all internal alarms in OSS/MMIS/SMAS applications and implement OSS and MMIS user interface layout modifications. You will also be responsible for distributing all new and upgraded documentation related to the SW, HW and equipment for the Network Surveillance.

Requirements: The successful candidate has basic technical education and long O & M experience, as OSS Administrator, from Ericsson radio system. Advanced knowledge of UNIX and SQL-programming as well as knowledge of TMOS and MMIS System Administration is required. You should also have good knowledge in English.

### NFM MANAGER

● Main responsibilities: You will lead and organise the work within Network Field Maintenance to fulfil the targets for the section, governed by the performance levels agreed on with the customer. You will also ensure that best practices are used for the work and that the organisation is encouraged to continuous improvement of network quality and cost reductions for the operation.

You are also responsible for planning of the training and development of the Network Field Maintenance staff.

Requirements: The successful candidate has a technical education within Telecommunication, Information Technology and Electronics, good knowledge of general telecommunication and mobile telephony system; especially in installation and NO&M. It is of great advantage if you have proven experience in the maintenance of telecommunication.

You have worked 2-3 years as manager for 25 persons. You have the ability to lead and motivate people and are conscious of responsibility. You also have experience with budgeting and negotiations with customers and suppliers.

You should be fluent in spoken and written English. Other languages may be needed depending on the local requirements.

### BS FIELD TECHNICIAN

● Main responsibilities: You will be responsible for guided corrective maintenance at replacement of HW at BS by following defined procedures. Tasks to be performed are ordered via Work Order from NO & MC.

Requirements: The successful candidate has basic

technical education and not less than 2 years of experience from Ericsson GSM radio system.

### SYSTEM FIELD TECHNICIAN (SWITCHES)

● Main responsibilities: You will be responsible for guided corrective maintenance at replacement of HW, of MSCs, HLRs and transit switches, following defined procedures. Tasks to be performed are ordered via Work Order from NO & MC.

You will also perform defined preventive maintenance routines of MSCs, HLRs and transit switches initiated by Work Order from NO & MC.

It is your responsibility to perform the charging data retrieval and deliver this to the customer's billing center in accordance to the existing routines and security regulations. You will also perform back-up of exchange-data in accordance to defined procedures.

Requirements: The successful candidate has basic technical education and not less than 2 years of experience from Ericsson GSM radio system.

### SPARE PART ADMINISTRATOR

● Main responsibilities: You will be responsible for maintaining the store of spare/consumable parts, ordering new spare parts from suppliers and for servicing of tools, equipment and vehicles within the field maintenance organisation.

Requirements: The successful candidate has a basic technical education and additional economic/logistic education, and/or long experience from working with spare parts for operators. Good knowledge in English is also required.

### MENTOR

● Main responsibilities: It will be your responsibility to investigate the training needs of new personnel and candidates. You will establish training plans for each of the individuals in the NO&M organization.

You will also be responsible for allocating the best, available training program for the organization and for guiding all personnel towards best possible skills by means of Structured On the Job Training (SOJT).

Requirements: The successful candidate will have a basic technical education and experience from Ericsson GSM Mobile System as System Engineers, not less than 3-4 years. Experience as teacher or instructor is required. You should also have good knowledge in English and good social- and pedagogical skills. Please, apply in writing with full Curriculum Vitae, containing details of your education, experience, reference and name of your current Manager.

**Application:** Odette Abiad E-mail: odette.abiad@ericsson.se Memo: erac.eraodab Find CV template att: <http://rtms/jobs/jobs.html>. It is important for us to know: when you will be available for an assignment, that your line manager is aware of that you have the intention to undertake an assignment.

Ericsson Radio Systems AB, Kista

### LOCAL PRODUCT MANAGER - CHINA

● TDMA Systems (BMOA) is one of the fastest growing business units within Ericsson Radio Systems. We are the market leader for cellular telephone systems and services based on TDMA/AMPS standards. Our mobile telephone system, CMS 8800, is the most sold system in the world, and our markets around the world are growing rapidly.

Are you a person motivated in using your technical support knowledge to assist the Local Company in China, based in Hong Kong? If so, you are a potential candidate for this position. We are looking for a Local Product Manager (LPM) who will work closely with the Customer, the Customer Account managers and the Sales and Marketing people.

As a LPM, you will be expected to perform tasks like: Participate in the promotion process through technical lobbying. Analyze the technical sales support needs of the Local Company, according to the market situation and Customer's technical requirements. Technically assist the sales people in making offers to the Customer. Support the Customer in resolving product related issues. Support the introduction of all suitable ERA processes and methods to the Local Company and the Customer. Support the introduction of all suitable ERA products to the Customer. Do product planning and Product Life management for the market.

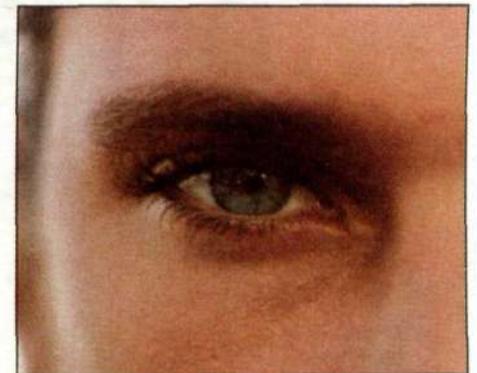
The ideal candidate has an engineering degree and three or more years experience in technical support/product management in the cellular industry or equivalent experience. You are fluent in English.

You are self-motivated, ambitious, outgoing and interested in taking the challenge of being a real support to the Local Company and a valuable adviser for the BMOA commercial areas. Could you meet the challenge? If yes, then contact us.

**Contact:** AM/P Christina Hyllander + 46 8 404 56 69 christina.hyllander@era.ericsson.se AM/P Johan Lembre + 46 8 404 69 06 johan.lembre@era.ericsson.se Application: Ericsson Radio Systems AB AH/H Catrin D, sing 164 80 STOCKHOLM catrin.dysing@era.ericsson.se

# MARKETING PROFESSIONALS

## LOOKING OUTSIDE THE BOX



### Customer Service Solutions at Wireline Systems is entering a new and exciting phase in 1999.

We're changing from the more reactive, hardware based way of working, to a more market and services oriented, proactive and flexible one.

### Moving away from the boxes.

Through cross-functional teams and joining forces with our Services colleagues at GSM Systems and TDMA Systems, we're stepping outside the traditional organisational boundaries and developing into a new type of organisation, where focus is placed on team work, on Action, on Value for us and our customers.

### Welcome to the future!

Services is a major part of the Ericsson future. And this future is about providing whole solutions, in defining the customer needs by taking a holistic view of the opportunity analysis. Not just looking at which products we can sell and matching services to these - but offering and delivering the performance and benefits the customer is looking for. Whether it is a services only contract or a combination with product offerings.

We're here to optimise the business opportunity for the customer.

### Our services mean better business!

### Feel the challenge tingle yet?

We now need several marketing professionals with the right attitude and a zest for international marketing. You are results oriented, have a head for good business and you're challenged by the opportunities in services marketing.

You'll be working with areas such as:

- marketing planning
- customer profiling
- market introduction
- sales optimising

Call us to find out more!

Richard Sims +46 8 719 83 98  
Gerard Delaney +46 8 719 60 74  
Gabriella Gerdin +46 8 719 79 30

Ericsson Wireline Systems is charting a new course in the communications industry - combining Ericsson unique strengths in wireline and carrier class communications with a strong utilisation of new technology based on ATM or on IP.

Our current installed base comprises some 140 millions telephone and ISDN lines in some 5400 exchanges. Wireline Systems is one of Ericsson's largest business units within the business segment Network Operators and Service Providers.



It's possible to go far by abandoning traditional power models and operating methods. That's the conclusion reached by the group in Älvsjö who developed the ATM exchange in record time.  
Illustration: Kerold Klang

## They gave up control and succeeded

Creative, independent employees and responsive managers. These are the factors behind Ericsson's success with the ATM exchange AXD 301, according to almost 180 people who developed the new exchange in record time.

The exchange is an essential part of Ericsson's attempt to become a datacom supplier.



Tomas Pihl, Finn Larsson and Ulf Wiger were involved in developing Ericsson's ATM exchange in record time. They believe that their success resulted largely from a less structured organization.  
Photo: Lena Widegren

Almost 180 people in Älvsjö, in southern Stockholm, have succeeded in getting customers to consider Ericsson a major datacom supplier in only a couple of years. The Ericsson designed ATM exchange was launched last September. Four months later, forty systems have been sold to operators in seven countries, despite strong competition from long-established ATM suppliers.

"The technology found in the AXD 301 is, in many respects, superior to several of the most well-respected datacom companies' systems. Alcatel and Siemens-Newbridge are a couple examples," says Ulf Wiger, systems manager at Älvsjö.

"Our self confidence has grown along with our product. The backbone of our organization is based on freedom and personal responsibility, where every employee also has authority."

Several employees in Älvsjö have been involved in other major projects, some of which were shut down after years of enormous amounts of development work. Centralized management and bureaucracy often put a lid on creative initiatives and shorter chains of command.

"Now it's like sitting up among the clouds and working. Nothing is difficult," says Tomas Pihl, product developer.

At Älvsjö, everyone sits under one roof. All 180 people. System management is an active and natural part of the developmental work. Product developers have every opportunity to influence the process.

"My employees should never feel as though my door is closed to them – those of us who represent system management must try to give them time and attention. The price that I pay is that I can't plan my work day. But I just have to accept that. In a flexible organization, there's no room for frustration over broken schedules."

The rapid lines of communication mean that many things are already taken care of when they finally end up on the management group's agenda.

"We are moving closer to the American datacom companies' way of working. At the same time, it is difficult to compare ourselves with their situation. They often work in companies that consist of only 10 or 20 people. In those situations, it is easier to be efficient and incredibly productive. In general, the respect afforded to American datacom companies is exaggerated. But we have come to realize that we have an edge when it comes to large, robust systems. They usually lack Ericsson's overall knowledge."

Lena Widegren

lena.widegren@lme.ericsson.se

### UPCOMING

**Week 12:** Ericsson publishes its environmental report on the Web. A printed guide will also be available soon. <http://www.ericsson.se/environment>

Ericsson will soon open a demo center for MINI-LINK BAS (Broadband Access System) in Dallas, USA, similar to the one in Milan, Italy.

### UPDATES

**March 18–24:** CeBIT trade fair took place in Hanover. Ericsson was present with a stand of record size and many new exciting products. Contact was on the scene.

**Tuesday, March 23:** Ericsson held its Annual General Meeting at Stockholm International Fairs in Älvsjö, Sweden. Contact will be reporting from the meeting.

Contact has created a web version of the organizational chart. It can be found on Contact's web site, which you can click your way to at <http://inside.ericsson.se>

### NEW ASSIGNMENTS

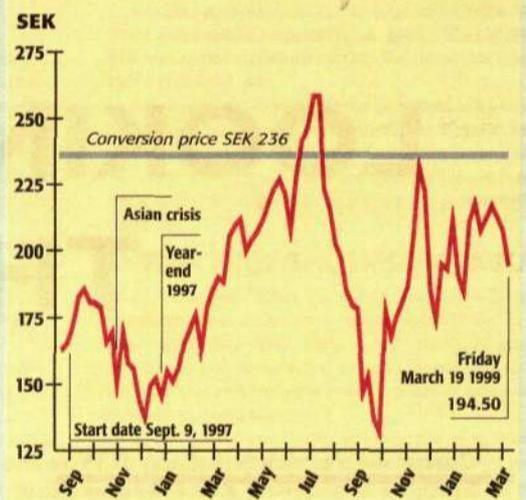
From May 1, **Torbjörn Smith** will be responsible for Western Europe in Jan Wäreby's Europe, Middle East and Africa and market area. Torbjörn Smith was most recently president of Ericsson New Zealand.



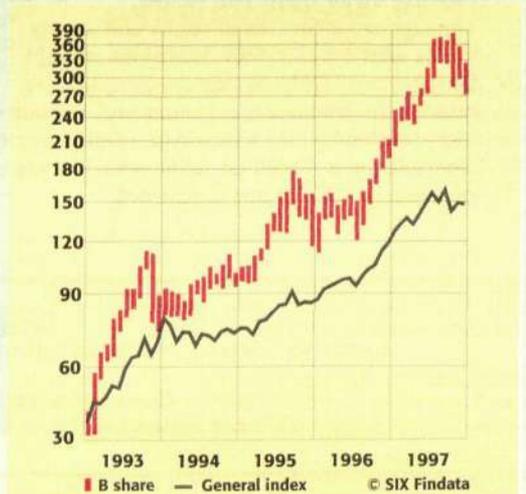
**Göran Olsson** succeeds Torbjörn Smith as president of Ericsson New Zealand. Göran Olsson was previously responsible for the implementation of the new organization in the Network Operators business segment.

**Ulf Berg** is the new manager of Ericsson Microwave Systems. He succeeds Jan-Åke Kark, who moves to Telia. Ulf Berg joins Microwave Systems from Saab Ericsson Space.

### THE ERICSSON B SHARE



An Extraordinary General Meeting of shareholders on September 9, 1997, approved a proposed convertible debenture program. The conversion period extends through June 30, 2003. For additional information, access the web site: <http://inside.ericsson.se/converti.htm>



# contact **finance & economy**

MARCH 1999

If Ericsson is representative of major corporations in general, it is reasonable to assume that waste and fraud within the company amounts to more than SEK 2 billion annually. In fact, nobody knows how much money is actually wasted or lost. Ericsson is now mustering greater resources to make internal audits more effective.



**Richard Minogue, internal auditor. A joint unit has now been formed for internal audits. Richard Minogue and his fellow auditors help to uncover cheating and fraud, but concentrate more on spreading "Best Practices" throughout the company, making sure that Ericsson works effectively and does not miss opportunities.**

Photo: Patrik Lindén

## Counting pennies

**W**e should not be regarded as internal policemen," was the first comment made by Richard Minogue when Contact met him at Telefonplan outside Stockholm. He is in charge of the parent company's Internal Audit unit.

It's easy to stereotype the department and look on internal auditors as some kind of detectives snooping around the company trying to find people who might be up to no good.

"Yes, of course, sometimes we uncover criminal activity, and we have reported several incidents to police authorities, but these are exceptional cases. Most of the time, we try to improve internal flows of information and coordinate external audits," says Richard Minogue. "Our primary goal is to identify and implement preventive measures."

### Take advantage of opportunities

Part of the job involves taking advantage of good opportunities, making sure Ericsson does not miss chances to save or make more money because of ignorance, outdated routines or negligence.

Internal audits are not a new concept within Ericsson. Resources today, however, are coordinated and strengthened in a functional unit to improve performance.

"We want to be regarded as a support unit for local company management. We are consultants who can help local management im-

prove financial and accounting flows and routines."

One of the main advantages of a corporate function for internal audits is that it becomes easier to transfer knowledge. The auditors try to disseminate "best practices."

The internal audit function is beginning to take shape and recruit new personnel following the reorganization of Ericsson. In the past, internal audits were handled by the business areas, which often regarded the work as the parent company's responsibility. Now that Ericsson's business areas have been discontinued, the responsibility for internal audits lies even more clearly with the parent company.

"We are developing what we call nodes in different parts of the world. The concept of working with one person in every country is not practical. It's preferable to form expert groups that render assistance within given regions. The foundation for this structure has already been established in Dallas, for North America, and in Sao Paulo, for Latin America. A similar function has been started in Melbourne, Australia.

"Conditions are more difficult in Europe and Asia. Both regions encompass a large number of countries with different cultures, which makes it difficult to create a cohesive organization. But we're working on it," says Richard Minogue. "Ericsson's local companies have been cooperating with each other for

years, and we plan to draw upon their experience."

It's easy for Richard Minogue to illustrate how internal audits contribute to Ericsson's profitability. The audits cover their costs several times over.

The work may vary from discoveries that products do not have to be discontinued because of new control methods to cases of million-dollar fraud.

Ericsson's internal audit team operates as an independent advisory service. The unit has no formal authority, but corporate management is receptive to its recommendations and opinions.

### Preventive effect

Some preventive effect lies in the fact that everybody knows there is an internal audit team, according to Richard Minogue.

"There is a shortage of villains and saints. Most people are somewhere in between."

There are no statistics kept on fraud and waste within Ericsson or any other company, but various estimates indicate that money lost and swindled generally corresponds to about 2% of total sales.

Patrik Lindén

patrik.linden@lme.ericsson.se

© <http://www.lme.ericsson.se/lmeda/cas/default.htm>

## CONTENTS

### Elegance in 19th century

Contact has found Ericsson's very first financial report from 1876. The figures were more manageable in those days, when Ericsson was a two-man company. The accounts were also esthetically more appealing – elegantly hand-written with a fountain pen.



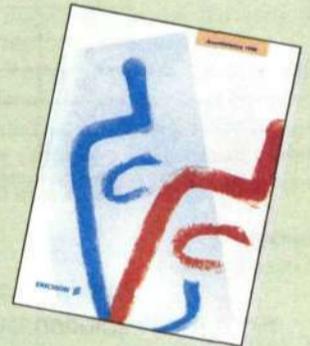
Photo: Lars Åström

### Electronic invoices soon

Quickfix is the name of a new invoicing system that will reduce manual routines and paperwork. In the near future, invoices will no longer be typed out. Instead, they will be entered directly in the customer's economic system.

### Around Ericsson in 80 pages

The company in figures. The 80-page annual report presents Ericsson's entire year in 1998. Contact has summarized the report in six pages of highlights. Economics can be complicated at times. Contact breaks down financial concepts and presents the year-end report in more comprehensible terms.

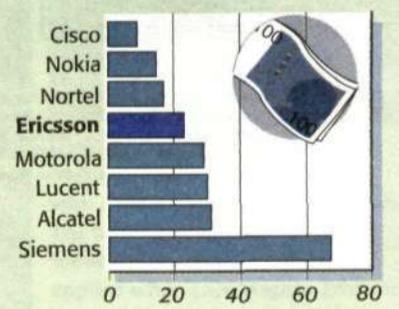


### Super segment makes big money

The new Network Operators business segment accounts for two-thirds of Ericsson's total sales. The segment includes GSM systems, Ericsson's largest and most profitable business unit.

#### SALES BY THE LEADERS

Invoiced sales in 1998  
USD billions



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AC	0.5	1.5
AD*	1	2
AE	1.25	2.25
AF	1.5	2.5
AG*	2	3
AH	2.5	3.5
AJ	3	4
AK*	4	5
AL	5	6
AM	6	7
AN	8	9
AO*	9	10
BA*	10	11
BB	12.5	13.5
BC	15	16
BD	20	21
BE*	24	25
BF	25	26
BG	30	31
BH	40	41
BJ*	49	50
BK*	50	51
BL	60	61
BM	80	81
BN*	99	100
CA*	100	101

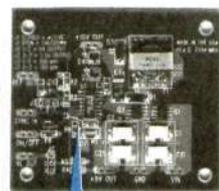
\*These gain versions are available as samples and in small quantities.

**2 Order a Gain Amp**

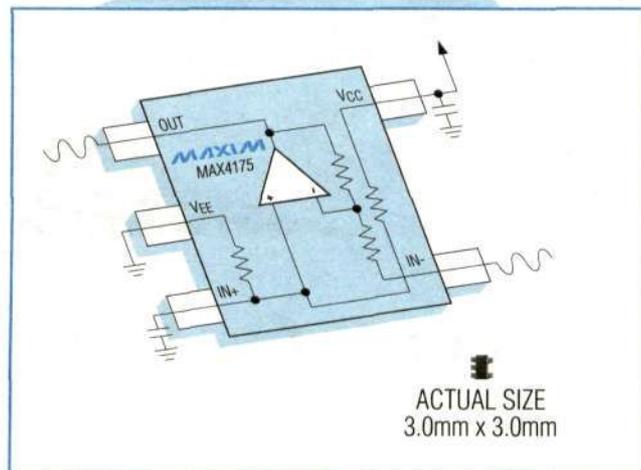
PART	GAIN	INTERNAL V <sub>CC</sub> /2 BIAS	GAIN-BANDWIDTH PRODUCT (MHz)	NO. OF AMPS PER PACKAGE	PIN-PACKAGE
MAX4174__†	Fixed	No	2.1 to 23	1	5-pin SOT23
MAX4175__†	Fixed	Yes	2.1 to 23	1	5-pin SOT23
MAX4274__†**	Fixed	No	2.1 to 23	2	8-pin μMAX/SO
MAX4275__†**	Fixed	Yes	2.1 to 23	2	8-pin μMAX/SO
MAX4281	Open-loop	No	2	1	5-pin SOT23
MAX4282	Open-loop	No	2	2	8-pin μMAX/SO
MAX4284	Open-loop	No	2	4	14-pin SO, 16-pin QSOP

† Insert the desired Gain Code into the blanks to complete the part numbers.  
\*\* Future product—contact factory for availability.

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- ⚡ Internal V<sub>CC</sub>/2 Bias
- ⚡ 0.1% Gain Accuracy
- ⚡ Low 300μA Supply Current
- ⚡ Drives 1kΩ Load
- ⚡ Frequency Compensation Optimized for Higher Gains



Maxim's new fixed-gain "Gain-Amp" amplifiers provide the smallest and simplest possible op amp solution by combining precision-trimmed on-chip resistors and a high-performance Rail-to-Rail® op amp in a SOT23 package. Maxim's proprietary trimming technology trims internal resistors to provide 0.1% gain accuracy, so you won't need to. The MAX4281/MAX4282/MAX4284 are open-loop versions of the Gain-Amp amplifiers.

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Gain-Amp is a trademark of Maxim Integrated Products.



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# Quickfix project makes invoices electronic

Nearly 250,000 invoices per day are sent from the major Ericsson companies to local companies. All of these are compiled and entered into the accounting system manually. Soon, several stages of this process will be removed and, instead, the use of electronic invoices, or EDI (Electronic Data Interchange), will enable the automatic entry of invoices in accounting systems.

This is the result of a cooperation project between Ericsson Radio Systems, Ericsson Mobile Communications, Ericsson Telecom, Ericsson Business Networks and Microwave Systems. The project was initiated by Karl-Henrik Sundström, from the Parent Company's financial control department.

The idea originally emanated in the former Mobile Systems business area, whose aim was to use EDI in flows between customers and suppliers. The idea flourished and, accordingly, will now be used for invoicing from the major companies.

"At the beginning of the project, we conducted an analysis to chart the flows between the major Ericsson companies and the local companies. Among other conclusions, this showed that about 20 of the approximately 120 local companies accounted for 80 percent of all invoices sent in 1997. This corresponded to a total of 210,000 outgoing invoices," explains Håkan Beckman, project leader of the Quickfix project.

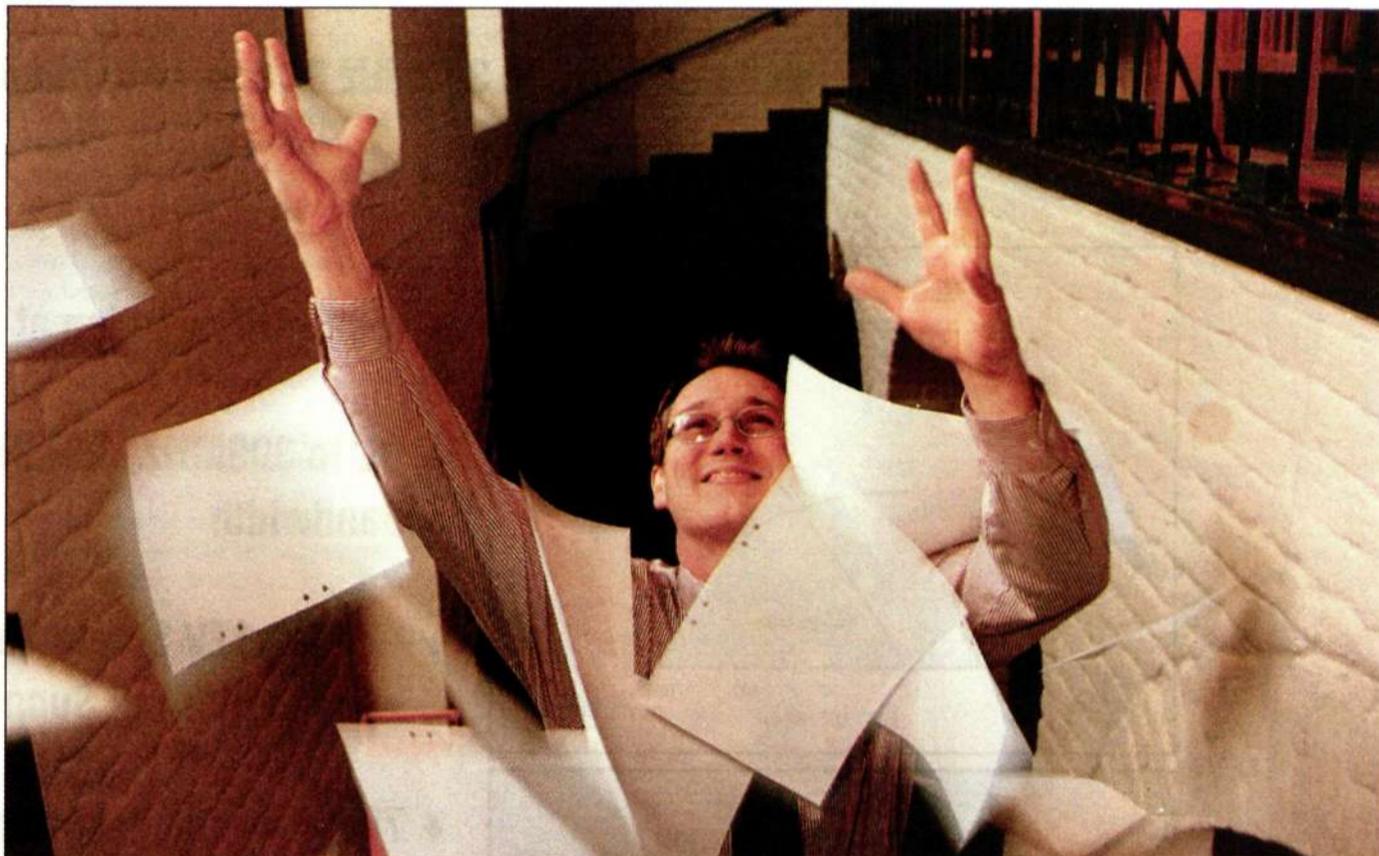


**Håkan Beckman**

## EDI for all the invoicing

The aim of the project is to use EDI for all of the five big companies' invoicing for goods and products. "To make this possible, we have created an invoice template that suits all the companies," says Håkan Beckman.

"We are using nine companies as initial pilots, after which we will add a further 28. These have been chosen because they have the largest volumes and they use several different financial systems."



**The paper work conducted in Ericsson's accounts departments will soon be reduced. Invoices from the five central companies to local companies are to be sent electronically. Håkan Beckman is the leader of this project, known as Quickfix.**

Photo: Lars Åström

The idea is that when the invoice is sent electronically, it will be entered automatically in the accounting systems used by the companies, what accountants call accounts payable subledgers.

Since the initiation of Quickfix, the scope of the project has been expanded.

"We realized that we needed a web interface for the companies that are not yet ready to handle EDI. At the same time, it became apparent that Ericsson's systems for netting transactions between companies (Nave and Match) required adaptations. The current systems are not millennium compliant and memo-based. It was therefore natural to decide to use a common web solution and infrastructure.

"We're creating a web application for the invoices, which we call webBill, and a new

web tool, called Pari, for the netting system.

"You can already see what the web applications look like by accessing the project's home page," Håkan Beckman continues.

## A layout has been created

By using web technology, a common invoice layout has been created for the whole of Ericsson. It will be included as a description in Fire 3, Ericsson's accounting system.

Handing an invoice that passes several different systems is quite costly, particularly when the invoice has to be printed out and entered manually in another system.

Quickfix has estimated that it will be possible to save about SEK 225 per invoice with the help of EDI. Since we are talking about 250,000

invoices, the total savings will be considerable.

"Our project will be self-financed almost immediately after it has been put into operation," adds Håkan Beckman.

Some 25 employees from operations and from Ericsson IT-service (formerly Ericsson Data) are involved in the project.

During the first phase, Quickfix will be applied for all invoices sent from the central companies to local companies. In the future, however, one might assume that invoices moving in the opposite direction will also be encompassed.

Patrik Lindén

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http://www.quickfix.ericsson.se

## The past was prettier

Nowadays, billions of Swedish crowns are involved when Ericsson presents its financial accounts. This has not always been the case. Contact has taken a look at Ericsson's very first main ledger.

The same principle is still applied. All transactions are entered in the relevant account in the main ledger. But in 1876 this was done with a quill pen.

It was in the spring of 1876 that Lars Magnus Ericsson started up his repair workshop for telegraph equipment. In those days, the amounts concerned were completely different. Under the heading Payroll Account for 1876, an amount of 673.91 was entered. Today, this amount of Swedish currency corresponds to the hourly rate of an inexpensive consultant. On the other hand, the 1876 Ericsson workforce consisted of only two employees plus a gofer, all located in a cubby hole at Drottninggatan, Stockholm. Ironically, Swedish Ministry of Communications is currently situated at the same address.

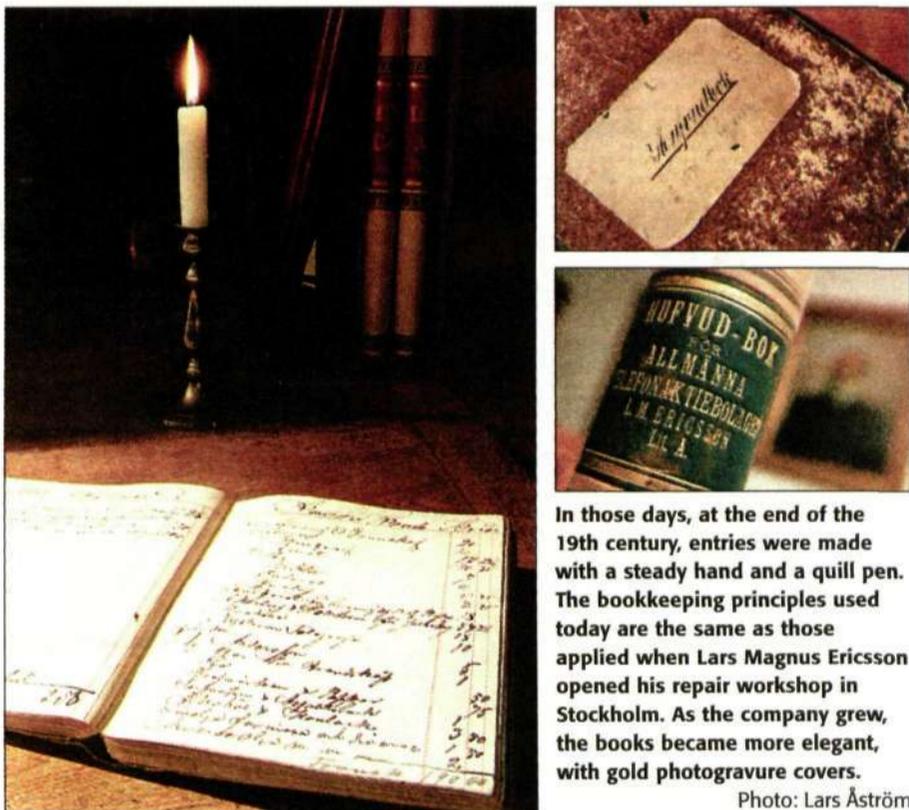
It is interesting to note that Ericsson's first main ledger, which was as thick as a thin paper back, covered the period from April 1, 1876 to July 28, 1882, that is more than six years. Today, the accounting entries for one day would vastly exceed this volume. In 1879, there was a noting of rent for the quarter: SEK 275. This provides additional perspective.

The main ledger also shows which customers the original Ericsson had and the value of their purchases: "Swedish State Railways SEK 7.25" and "Military Telegraph SEK 6.00." A far cry from today's billion-crown orders.

A further look in the elegant handwritten books reveals early notations about foreign transactions, which included "the Paris station" and the "Buenos Aires project."

Ericsson's ancient archives are now stored in the southern Stockholm suburb of Hammarby. The archives includes 550 shelf-meters of Ericsson material, and not just bookkeeping. There are also about 250,000 photos.

Patrik Lindén

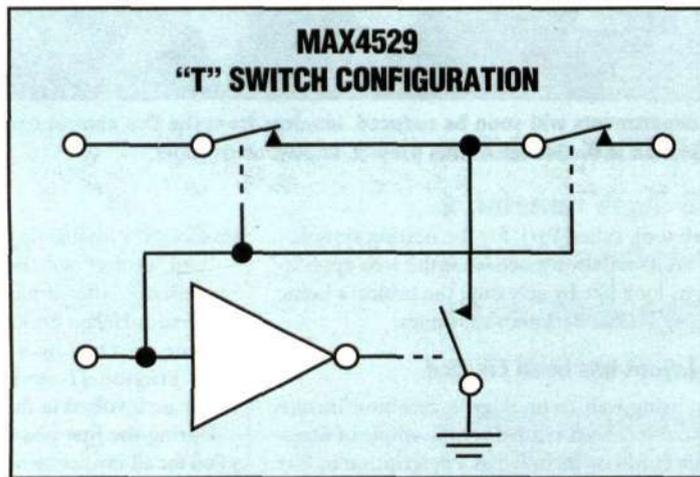
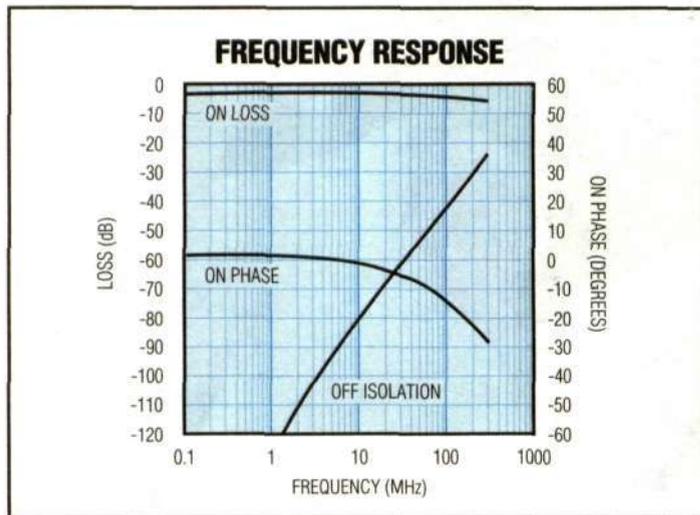


**In those days, at the end of the 19th century, entries were made with a steady hand and a quill pen. The bookkeeping principles used today are the same as those applied when Lars Magnus Ericsson opened his repair workshop in Stockholm. As the company grew, the books became more elegant, with gold photogravure covers.**

Photo: Lars Åström

# FIRST 300MHz VIDEO/RF SWITCH IN 6-PIN SOT

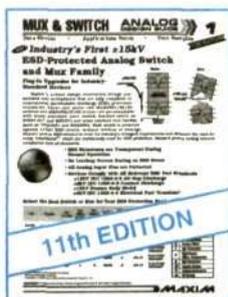
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# Around Ericsson in 80 pages

The 1998 Ericsson Annual Report has arrived. It was published just over three weeks ago and contained a summary of all the significant events at Ericsson during 1998.

On the following pages, Contact endeavors to summarize and illuminate the most important information in the Annual Report.

Although the Annual Report is primarily a financial document, it also includes information about strategies and other general insights into Ericsson's various units and objectives.

The Annual Report is Ericsson's single most important channel of information to shareholders. It is read from cover to cover by stock market analysts and is used as source material by many journalists and researchers.

A total of 425,000 copies of the 1998 version were published in Swedish and English. Most of them were printed in the US, where the majority of Ericsson's foreign shareholders are domiciled.

The preliminary report on operations in 1998, which contained all important figures about developments during the year, was released as early as January 28. The Annual Report, which was published five weeks later,

consists of much more detailed and comprehensive information.

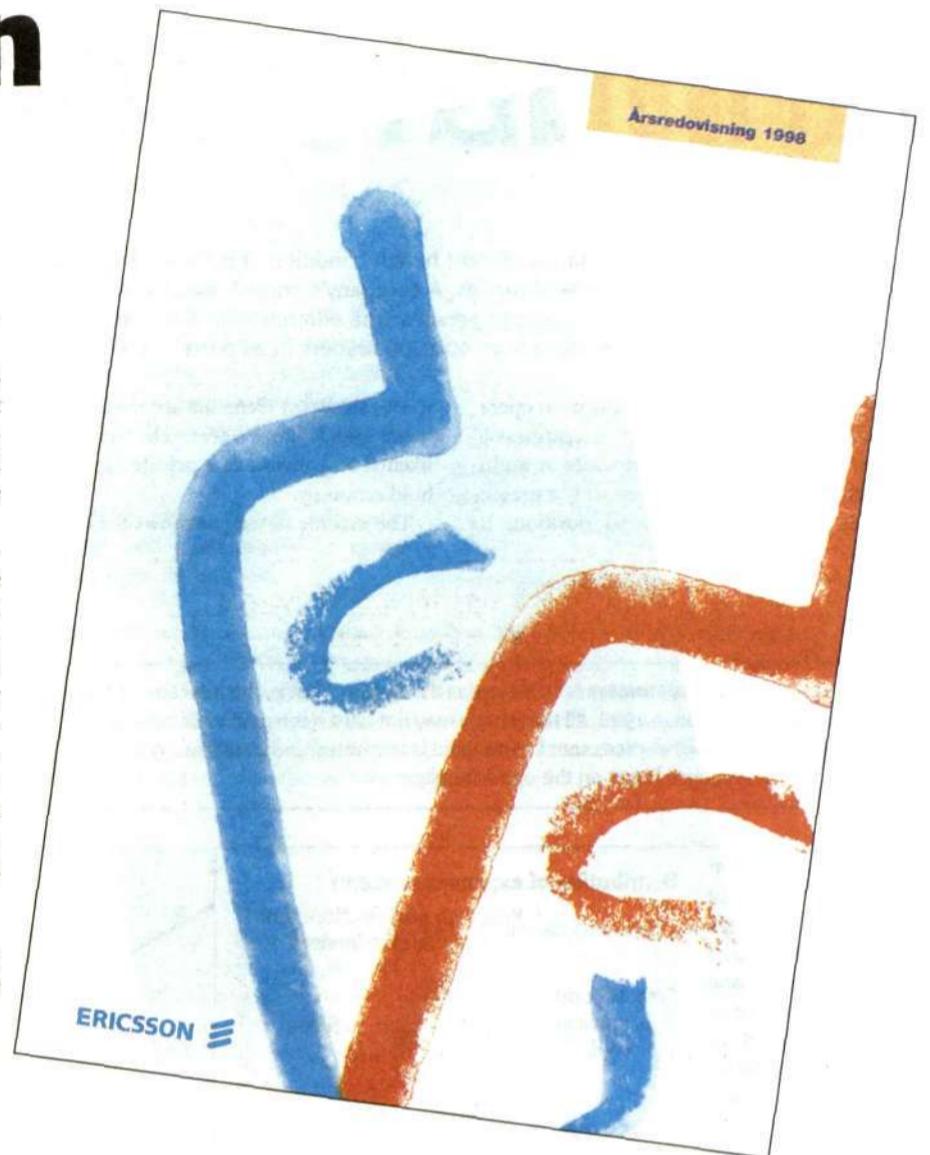
A sample of the Annual Report's contents is presented on the following pages. Readers intent on gaining more in-depth knowledge of developments and trends within Ericsson should naturally read the Report itself, which can be ordered by e-mail or read on the Internet.

A considerable amount of the contents is governed by laws and regulations. For example, the various stock exchanges on which Ericsson shares are listed place certain requirements regarding the layout and contents of the Annual Report. Certain other features are regulated by the Swedish Companies Act. The financial markets impose their own specific demands regarding the information required and its presentation. On the whole, this means that certain sections may seem quite difficult to penetrate. However, most of the information is easy to read and well worth the effort.

Patrik Lindén

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<http://www.ericsson.se/Reports/>  
[http://www.ericsson.se/annual\\_report/1998/eng](http://www.ericsson.se/annual_report/1998/eng)



## Broad ownership but concentrated power

Ericsson shares can be bought and sold in six different countries: Sweden, Germany, the U.K., France, Switzerland and the U.S. Most trading in the shares, approximately 40 percent, is conducted in Sweden, followed by the U.S. and the U.K.

There are two types of shares: Series A, which carry one vote each at shareholder meetings, and Series B,

which carry one thousandth of a vote. Most trading is conducted in Series B shares. Swedish interests own nearly all of the A shares, which explains why Ericsson is controlled by the Wallenberg sphere and Handelsbanken. Although they do not own a majority of the total number of shares, they hold a majority of the Series A shares, which gives them considerable power.

Approximately half of the shareholders are Swedes. Of the other

nationalities, the U.S. is the largest, followed by the U.K. Most of the shares, namely 90 percent, are owned by Swedish or international institutions.

The price of Ericsson shares fluctuated considerably during 1998. The highest price of SEK 268 was quoted on July 21 and the lowest price, SEK 118, was noted immediately prior to Sven-Christer Nilsson's meeting with senior Ericsson executives in October. This is a very large

span and there was considerable criticism from analysts and the mass media regarding the information provided by Ericsson. The critics believe that Ericsson has been too secretive, which has impeded valuation of its shares. Despite the volatility, however, the share was worth 29 percent more at the end of 1998 than at the beginning. During the same period, the Stockholm Stock Exchange's general index rose by slightly more than 10 percent.

Ericsson's objective is to minimize share-price volatility and it has an ambition of releasing information that is as unambiguous as possible. The reason for this is to ensure that the market is not taken completely by surprise by either positive or negative items of news, which would otherwise lead to considerable fluctuations in valuations of the company.

Patrik Lindén

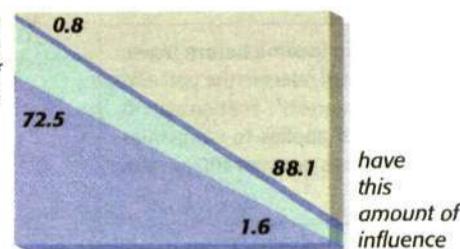
### THE SIX STRONGEST OWNERS ACCOUNT FOR MORE THAN 80 PERCENT OF ERICSSON

Largest shareholders in terms of voting rights	Voting rights	Share capital
AB Industrivärden	26.4	2.3
Investor AB	22.2	3.3
Wallenberg foundations	16.5	1.4
Svenska Handelsbanken's pension foundations	5.6	0.5
Skandia	5.0	1.3
Svenska Handelsbanken's pension fund	4.8	0.4

If the list is extended, the 12 owners with the strongest voting rights control slightly in excess of 90 percent of Ericsson. A total of 11 of these 12 owners represent the Wallenberg and Handelsbanken spheres. The only owner outside these spheres is the Fourth AP Fund, in 11th position.

### A few shareholders own a lot

0.8 percent of all shareholders account for 88.1 percent of the shares. At the same time, 72.5 percent of the shareholders account for 1.6 percent of the shares. In other words, Ericsson has a few major shareholders and many small shareholders with no actual influence.



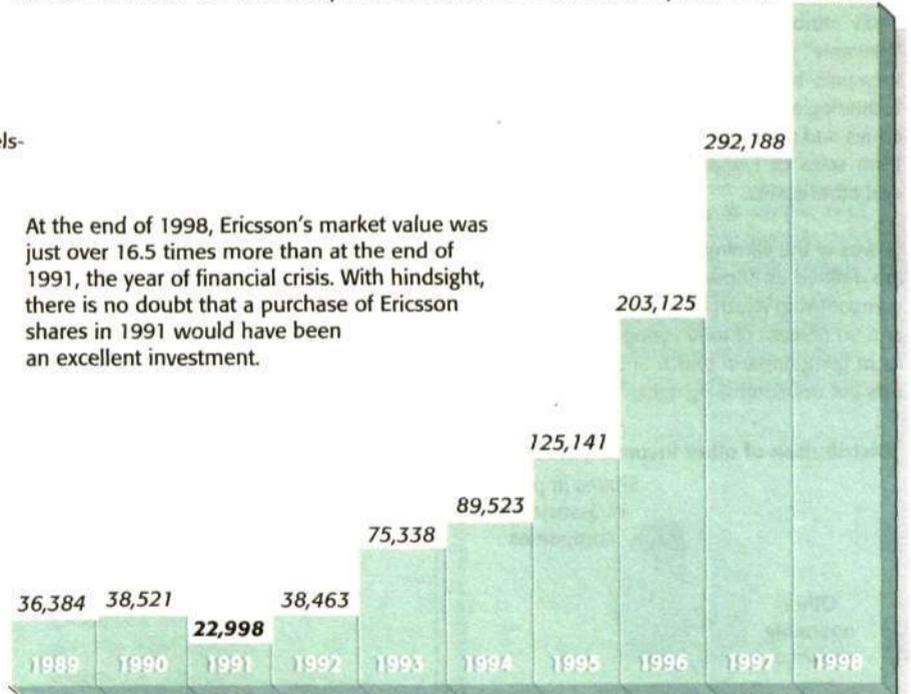
### Ownership structure

No. of shares/holders	Percentage of total shareholders	Percentage of total shares
1-500	72.5	1.6
501-5,000	23.9	6.2
5,001-20,000	2.8	4.1
20,001 -	0.8	88.1

### HOW THE MARKET VALUED ERICSSON

#### Market capitalization on the final day of share trading (SEK million)

Ericsson's value grew sharply in 1998. The graph shows the market's valuation of Ericsson, that is the price of each share on the final day of share trading multiplied by the total number of shares. This is normally termed market value or market capitalization. **379,231**



At the end of 1998, Ericsson's market value was just over 16.5 times more than at the end of 1991, the year of financial crisis. With hindsight, there is no doubt that a purchase of Ericsson shares in 1991 would have been an excellent investment.

# Annual report takes the company's temperature

The annual report shows a company's current health condition. It is important to shareholders, analysts and other interested parties. A company's annual report is similar to individual tax returns filed annually by private persons. The difference, in Ericsson's case, is that its annual report is read by more than 400,000 readers in all parts of the world.

All companies prepare annual reports on operations during the preceding year – regardless of whether they are one-man companies or multinational groups. The annual report is a presentation of a company's financial position. Its

most important elements are the income statement and balance sheet. The report may be likened to a review of a private family's household economy. The income statement shows the financial re-

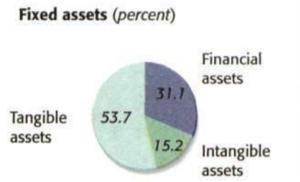
sults of a given year. It presents the company's operating revenues and expenses. The balance sheet, in turn, is a more general presentation of the company's financial position, not only for the preceding year. It also shows the company's liabilities and assets. Compared with household budgets, the income statement shows sources of income and expenses. The balance sheet shows savings and assets as well as liabilities. For a private household, the family's house and car

would be listed as assets, plus any savings. Liabilities would include mortgage loans on the house.

Ericsson's income statement and balance sheet in 1998 are presented in this two-page spread. They are somewhat simplified and explanations of all major items are included. For complete information, reference is made to the annual report, which analyzes every item in greater detail, supported by more reference material.

**Assets are divided into two categories.** Fixed assets consist of buildings, machinery and equipment, computers, cars and other assets with life spans of three years or more. Current assets are defined as assets intended for sale or arising from sales. They also include the company's cash and bank deposits totaling SEK 11.9 billion.

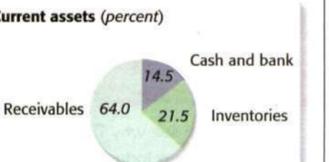
**Fixed assets** are divided into three subgroups. The largest comprises tangible assets, which include buildings, land and equipment, defined as assets with readily recognizable values.



Financial assets include Ericsson's shares and participations in other companies, for example.

Intangible assets are more difficult to define. For example, they include patents and trademarks, items that have no value per se, but which cannot be bought and sold in the same manner as buildings, for example. Intangible assets also include Goodwill assets that arise, for example, when Ericsson acquires companies for purchase prices in excess of values for their fixed and current assets. The surplus is called goodwill, which may refer to established customers or trademarks.

**Current assets** are also divided into three subgroups, with receivables comprising the largest group. Receivables are defined as money owed to Ericsson by other interests, that is, money Ericsson is due but has not received.



Inventories are almost self-explanatory. They reflect the value of products and goods held in stock at various Ericsson installations. Raw material supplies and stocks of finished products not sold or invoiced are included among inventories.

Cash is defined accurately as Ericsson's cash assets and bank deposits maintained to meet payroll and other expenses.

**Total assets.** At year-end 1998, the value of Ericsson's total assets was SEK 167.45 billion.

In addition to assets, unfortunately, companies also have liabilities, which are divided into three categories in this presentation.

**Provisions.** Under this item, Ericsson allocates money for expenses the company knows it has to pay, but which have not yet fallen due for payment. They include taxes, which the company knows it must pay, and pensions that have to be paid in the future. Provisions are also made for risks that are difficult to project or foresee. For example, Ericsson must be prepared to absorb penalty fees for late deliveries or defective products that must be replaced during their guarantee period.

**Other liabilities.** This item is nearly as simple as it looks. Other liabilities consist of money owed to various other parties by Ericsson. They may include long-term liabilities, such as the employee convertible loan. The company also has short-term liabilities, however, which may be something as simple as an invoice Ericsson has received and must pay within 30 days.

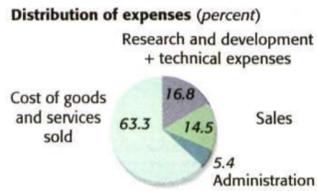
**Minority interests' share in equity of consolidated subsidiaries.** This cryptic heading means simply that owners of minority interests in Ericsson companies are entitled to a share of capital in the companies, or equity. The item represents a minus entry for Ericsson.

Assets less liabilities and minority interests in equity amount to SEK 63.1 billion, also called **shareholders' equity**, which may be described as accrued capital invested by owners over the years. In the balance sheet, shareholders' equity is usually entered as a liability, which always renders assets and liabilities equal. Shareholders' equity, accordingly, is a liability owed to shareholders and, therefore, is treated as a deduction.

Ericsson's total liabilities amount to SEK 102.3 billion.

**Money received from customers** is called net sales, or sales. That is, the total amount of invoices sent by Ericsson in 1998. All the money may not have been paid to Ericsson during 1998. The amount of invoices sent but not paid is presented under trade accounts receivable. See the balance sheet on the opposite page.

**Expenses.** This item includes most of Ericsson's expenses during the year. "Cost of sales of goods and services," the largest item, is defined as costs directly attributable to products and services sold by Ericsson during the year. It includes raw material costs, for example, as well as costs for parts and components Ericsson buys from subcontractors. The expenses also include services and payroll expenses for production and installations.



Research and development as well as technical expenses are defined as costs not directly attributable to a given product or service. They include development work conducted by Ericsson in 1998 on systems still not marketed by the company.

Selling expenses include wages, salaries and other costs incurred by the sales organization. Expenses listed under this item are costs not directly attributable to certain orders or customers, for example, costs for the preparation of marketing material and similar expenses.

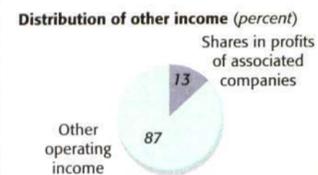
Administration expenses are costs incurred for corporate staff functions and management. They include costs for all persons not directly employed in production, research or sales, including the President and CEO's salary, head office personnel and costs for Contact, your Ericsson newsletter.

**Financial income** consists mainly of interest income and dividends from securities.

**Financial expenses.** This item consists mainly of interest expenses for Ericsson loans. A small percentage comprises expenses for employee convertibles.

**Other revenue** is defined as income not normally attributable to regular sales operations. "Revenue" is the largest item, including license fees paid by other companies to use Ericsson technologies. This item also includes patent revenues and commissions as well as capital gains from sales of Ericsson companies, machinery and other assets.

Shares in the earnings of associated companies are defined as Ericsson's share in the profits of companies in which Ericsson owns between 20 and 50 percent of total voting rights, or all profits in companies in which Ericsson owns interests but not controlling rights.



SEK billions	
Money from customers	184.44
Expenses	-166.31
Other revenues	1.14
Financial income	2.23
Financial costs	-2.47
Minority interests in income before taxes	-0.83
Income before taxes	18.20
Taxes	-5.17
Income for the year	13.03

**Minority interests in income before taxes.** This rather cryptic item refers to the percentage of minority interests' entitlement in Ericsson's income. It applies to companies in which Ericsson does not own 100 percent of all shares.

**Taxes.** This item refers to income tax charged to the company. It does not include employee income taxes, value added tax or other tax charges. In addition to Sweden, taxes are paid in all other countries where Ericsson conducts business operations.

**Net income for the year.** This item is self-explanatory – income for the year, in this case, slightly more than SEK 13 billion. Approximately SEK 4 billion will be paid to shareholders in the form of dividends. The balance will be retained in the company to finance investments. Most references to profit for the year relate to income before taxes, which amounted to SEK 18.2 billion in 1998. Since tax rates vary in different countries, and change slightly over the years, it may be more interesting to focus on income before taxes for comparative purposes, but income after tax is always the amount available to the company.

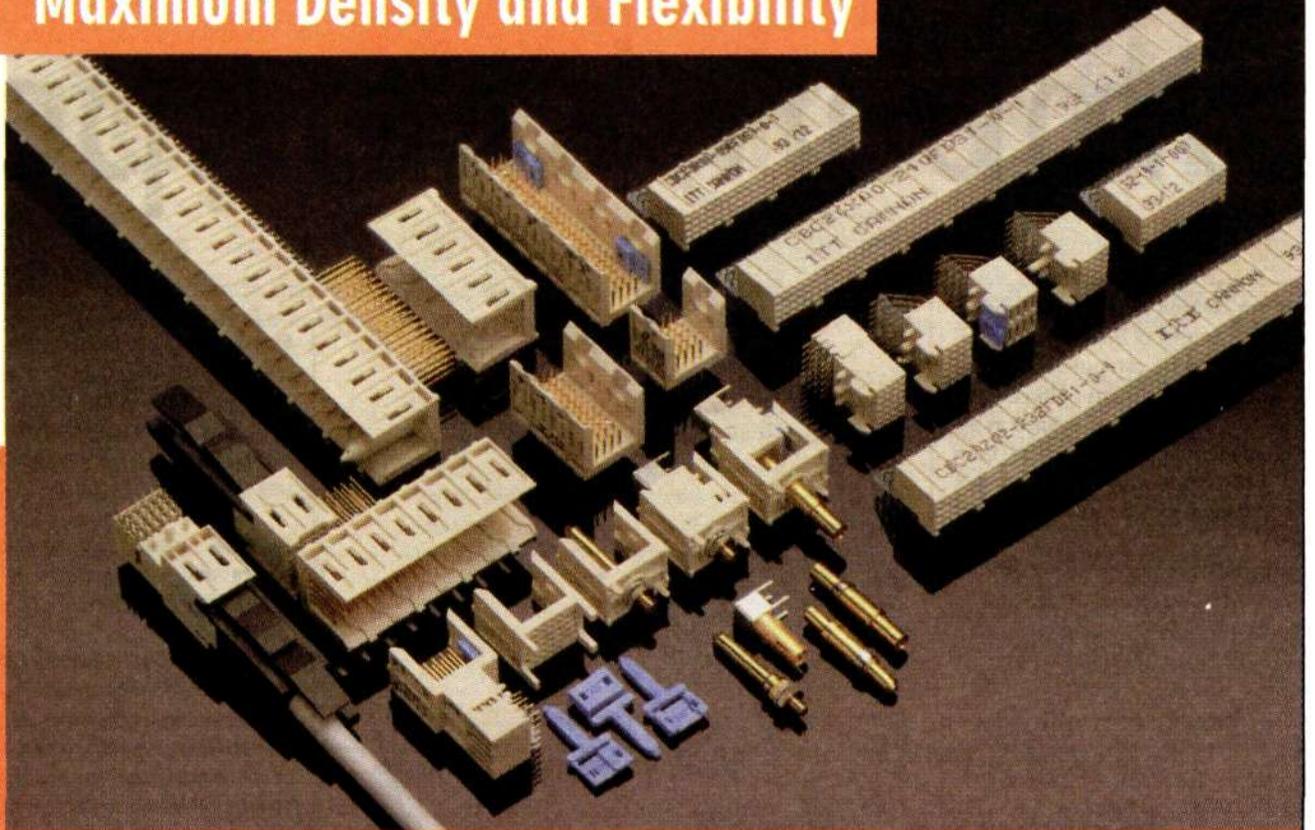
SEK billions	
<b>Assets</b>	
Fixed assets	41.92
Current assets	125.53
Total	167.45
<b>Liabilities</b>	
Provisions	22.28
Other liabilities	80.01
Total	102.29
Minority interests' share in equity	-2.05
Shareholders' equity	63.11
Assets – liabilities and minority interests =	63.11

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## DISCOVER YOUR PARTNER

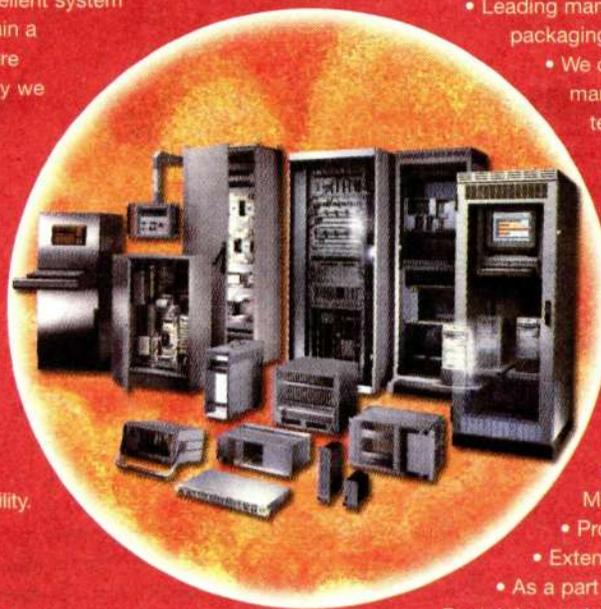
Schroff is one of the world's leaders in electronic packaging and electrical enclosures. Combined with excellent system integration capability: we help you maintain a competitive edge in global markets. We are committed to customer service. That's why we manufacture at key locations around the world, to give technical support and common products throughout the world, comprehensive stocking and timely delivery.

### THE SCHROFF PRODUCT PROGRAMME

- Cabinets, cases and enclosures for indoor and outdoor applications, standard and special solutions
- Subracks in accordance with 19" and metric standards. Special solution capability.
- Backplanes, test adapters
- Thermal management
- Power supplies
- Integrated "Enclosure System" deliveries

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- Leading manufacturer in the field of electronic packaging for more than 25 years
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- Globally certified in accordance with ISO 9000 and ISO 14000 quality- and environmental management systems.
- Highly competent Engineering capability.
- Core competence in Thermal Management and Shielding (EMC)
- Production in 11 factories in 3 continents
- Extensive internal test capabilities
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MORE VALUE FOR YOU

# Super segment accounts for two thirds

**The newly formed business segment Network Operators and Service Providers, or Operators as it is called less formally, is Ericsson's largest and most profitable.**

Two thirds of Ericsson's sales are derived from this segment. Nearly half are GSM Systems, which thus strengthens its position as Ericsson's economically most important business unit. Ericsson has supplied GSM systems to 65 countries in all parts of the world, and the future continues to look bright. Each month, GSM operators add five million subscribers.

TDMA Systems, which was formerly known as D-AMPS or American Standards, is no small unit for Ericsson, but it is only one third of the GSM unit in size. TDMA is a digital enhancement of the analog AMPS standard. Both GSM and D-AMPS are based on TDMA technology, with D-AMPS accounting for some 18 million subscribers around the world. The largest markets are North and South America, as well as parts of Asia.

Japan has its own cellular standard called PDC. This is also a business unit within the Operator segment. Although the standard is unique for Japan, there are 39 million subscribers, with nearly one million being added monthly.

The entire Operators segment has a total of more than 68,000 employees. Included are both fixed and mo-

bile systems, which is a logical development, given that an increasing number of operators have both fixed and mobile networks. Convergence of the two types of networks is also a current trend. The Italian operator Wind is one of the first with such a network. Customers receive a single bill for telephone services, regardless of whether they are fixed or mobile. Other services, such as voice mailbox, will also be the same.

Other units included in the super segment are Transmission Systems and Datacom Networks and IP Solutions.

Last year, Ericsson sold 24 million mobile telephones, a 50 percent increase over 1997. Phones account for the lion's share of the new Consumer Products business segment, which in turn accounts for one quarter of Ericsson's total sales.

## Strong price pressure

Several trends were evident during 1998. These included strong price pressure on mobile phones, which was estimated at 30 percent for Ericsson's product portfolio.

Another clear trend was an increase of pre-paid subscriptions. In western Europe, pre-paid now account for one third of all mobile telephone subscriptions. Pre-paid subscribers also often buy simpler phones. One probable consequence already making itself felt is that subsidies will be reduced. Nonetheless, Ericsson expects to sell 200 million mobile phones in 1999.

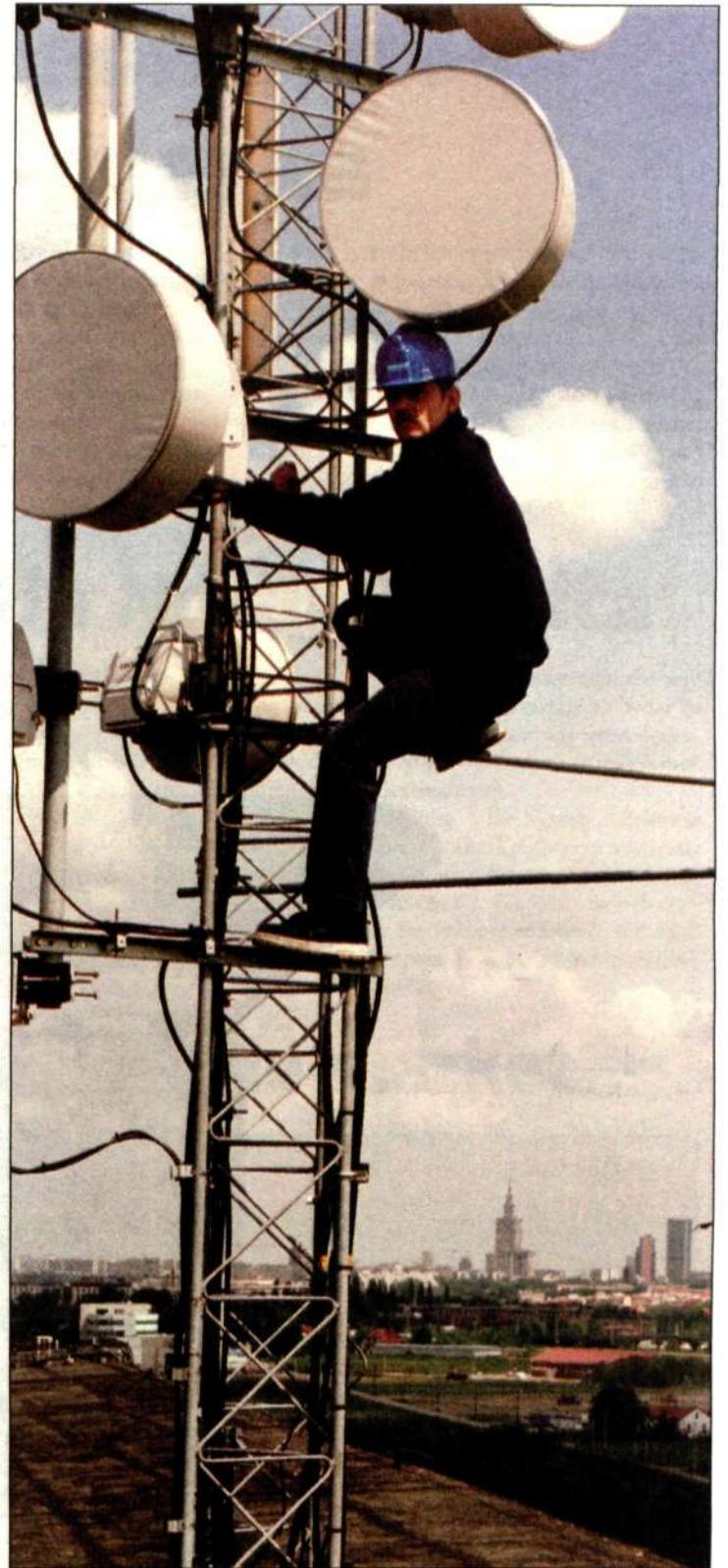
During 1998, Ericsson launched the Make Yourself Heard branding campaign, which was seen around the world.

## Enterprise Solutions

Enterprise Systems constitutes the major portion of the new Enterprise Solutions business segment. Its core product is the PBX. In this segment, Ericsson grew and took market share in 1998.

Also included in the segment is the Cordless Office business unit. Cordless penetration is still only two percent, giving this unit plenty of room to grow. Ericsson intends to lead development in this area. Another newly established business unit in this segment is Business Consulting, with more than 4,000 employees who will help companies with consulting, integration and administration of innovative network solutions.

Slightly less than 7 percent of Ericsson's 1998 sales were derived from other units. These include Defense Systems, which received a contract from Greece for the Erieye reconnaissance radar system. In the Cables business unit, traditional copper cables still dominate, but optic cable is growing. Components group is by far the largest unit among other operations and includes sub-units for Energy Systems, Microelectronics and Electronics Distribution.



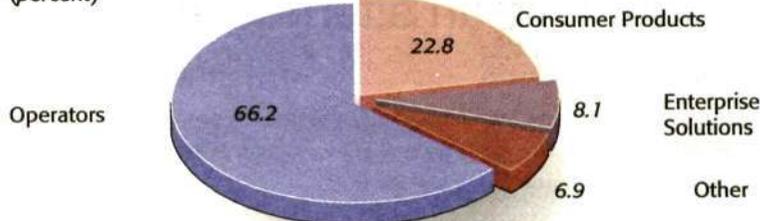
GSM systems is the largest and most profitable business unit within Ericsson, accounting for nearly one third of total sales. Here an Ericsson technician is working on an expansion project for Warsaw's GSM network. Photo: Patrik Lindén

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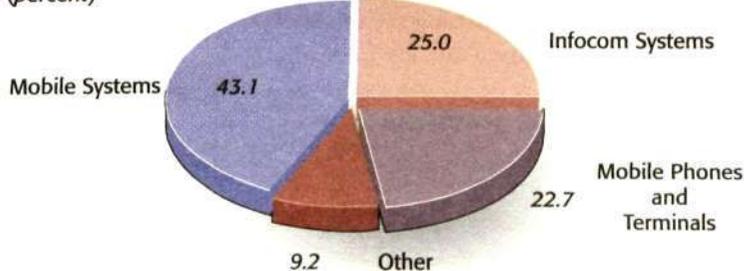
## WHERE THE MONEY COMES FROM

A breakdown of 1998 invoiced sales was prepared for the new organization as if it were already in place. These pro forma accounts show that the new Operators segment is larger than all other segments and operations combined.

**New organization, invoiced sales by business segment\* (percent)**



**Old organization, invoiced sales by business area\* (percent)**



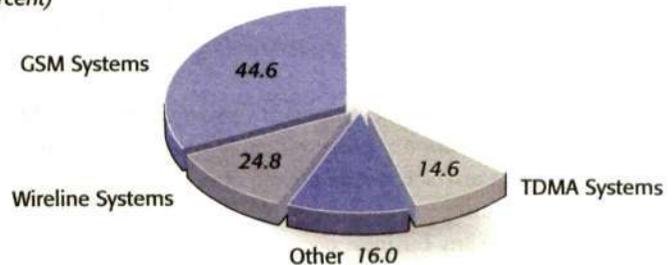
If invoiced sales are compared before and after the new organization, it is clear that Mobile Telephones and Terminals remains substantially unchanged as Consumer Products in the new organization. The old Infocom business area was divided between Enterprise Solutions and Operators. Some operations previously included among Other Operations were transferred to Operators.

\* The diagrams do not take internal invoicing into account.

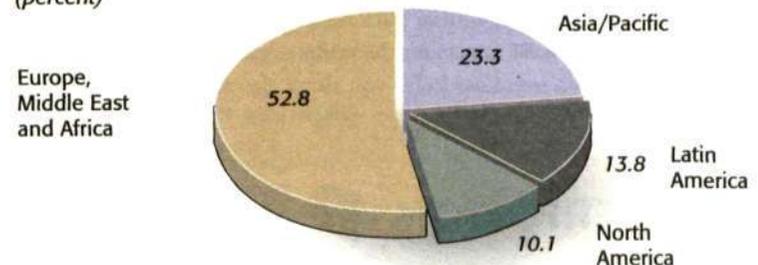
## GSM SYSTEMS LARGEST IN THE OPERATORS SEGMENT

It is interesting to study the break down of sales within the largest segment, Operators. Here it is apparent that GSM Systems is by far the largest business unit. A simple calculation shows that GSM Systems alone accounts for nearly one third of Ericsson's total sales.

**Breakdown of invoiced sales within the Operators business segment (percent)**



**Invoiced sales by market area (percent)**



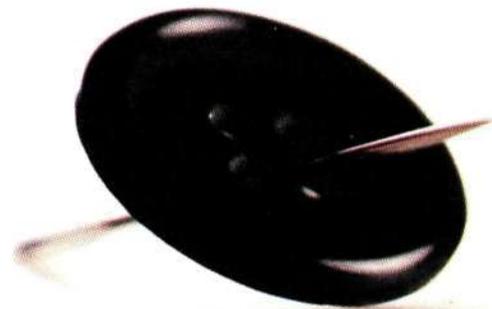
The annual report also includes a breakdown of sales for the new organization by market area. Not surprisingly, we see that Jan Wäreby's market area Europe, Middle East and Africa is in a class of its own. This market area consists of a total of 122 countries and also includes six of Ericsson's ten largest markets.



#### BUTTON CLIPS

Reattach the buttons that have come loose by using plastic Button Clips, just pass through the fabric and clip on the back.

The product is one of the alternative solutions from Ung Innovation Sverige (Young Innovation Sweden), an organization dedicated to helping young people make their ideas a reality.



## The obvious is only obvious until you have an alternative

Force of habit is development's worst enemy. Regardless of whether it applies to a problem as mundane as being able to quickly reattach a shirt button or something much more fundamental.

Before any business decision is made, it is always possible to find an alternative, a new way of thinking that can develop your product portfolio.

Breaking familiar patterns requires courage, knowledge and – not least – facts on the table.

Business Case helps you along the way. It is a tool that lays

bare the problems and opportunities involved in various alternatives based upon the assumptions you make.

Would you like to learn more?

Visit [etpweb.ericsson.se](http://etpweb.ericsson.se) and order a handbook called "A Little Book on the Art of Doing Business".

Sign up for a workshop where you will have the opportunity to handle Business Case in practice, connected to how you should work strategically with provisioning from a life cycle perspective.

Afterwards, the obvious may no longer be quite as obvious.

**ERICSSON** 



The U.K. is Ericsson's largest market in Europe and the company's third largest market in the world.

Photo: Mia Widell Örnung

## Stronger in Europe

Europe is the base for 13 of Ericsson's 20 largest customers. Europe, the Middle East and Africa also comprise Ericsson's largest market area, accounting for about 50 percent of total sales in 1998.

The market area encompasses 122 countries. Ericsson conducts some form of business activity in 100.

Mobile systems are Ericsson's greatest strength in Western Europe, accounting for about half of all mobile telephony contracts signed by Ericsson.

The United Kingdom is the market area's largest single market and Ericsson's third largest market in the world, with major customers such as BT (British Telecom), Vodafone and Cable & Wireless.

Telecom Italia is the largest cus-

tommer in Italy, but Ericsson also has strong business relations with Wind, the country's third largest mobile operator.

Sales in Sweden were virtually unchanged in 1998. Ericsson has about 30 percent of the Swedish market for mobile telephone systems. The first contract for IP-telephony in Sweden was signed last year with Tele2.

Turkey rose into the Top 10 list of Ericsson's largest markets in Europe in 1998. Ericsson booked a large order for expansion of Türkcell's GSM network.

Israel is Ericsson's largest market in the Middle East. Ericsson conducts activities in all countries throughout the region, however. Ericsson is active in 20 of 55 countries in Africa, where the Republic of South Africa and Egypt are the company's largest markets.

## Ericsson dominates in Latin America

Brazil is without a doubt Ericsson's largest market area, larger than the four next-largest market areas put together.

In Brazil, just as in Latin America as a whole, Ericsson has a market share of 40 percent for both fixed and mobile systems.

During 1998 a privatization wave swept through the whole region, resulting in the awarding of many new licenses. Competition is becoming much keener. The fact that Ericsson has been around a long time is a big advantage and in many markets Ericsson is looked upon as a local company.

Mobile telephone density is low.

In Brazil, only four percent of the population have a mobile telephone, so the future looks bright.

Central America and the Caribbean, which also belong to this market region were badly affected by Hurricane Mitch. Ericsson, together with Telefonos de Mexiko, has donated equipment and telephones to the affected countries.

## One tenth in North America

The North American market area consists of only two countries, U.S. and Canada. Sales of mobile telephones overshadow all other activity here. Mobile telephones account for 87 percent of sales in the U.S. and Canada.

There are many large customers in North America. Five of Ericsson's 20 largest global customers have their

home base in the U.S.: Airtouch, AT&T, BellSouth, MediaOne and SBC Communications. In addition, there are other large customers, such as, MCI WorldCom and Omnipoint. In Canada, Microcell and Rogers Cantel are major customers.

Slightly more than one person in five in the U.S. has a mobile telephone. The reason why this figure is not higher is because calls are expensive.

However, the fees are on the way down. 1998's largest order by far in the market region was when operator AT&T purchased one million mobile telephones.

During the year Ericsson acquired the Californian company Advanced Computer Communications (ACC). The new research center for Internet solutions, Cyberlab East, was also opened in Manhattan, New York.

## China largest single market

Asia did not have a good year in 1998. Several countries in the region struggled with economic crises. Ericsson emerged relatively unscathed, however, as sales in the Asia/Pacific market area declined only three percent.

China was the main reason for Ericsson's relatively good results in Asia last year. Excluding sales invoiced in the Chinese market, sales in the region were down 28 percent.

China passed the U.S. in 1998 as Ericsson's largest single market. Sales rose more than 40 percent. The mobile telephone market in China has about 25 million subscribers, but that figure represents only 2 percent of the nation's population. Ericsson's



China was Ericsson's largest single market in 1998.

Photo: Studio Nilsson & Lundberg

share of the market for mobile systems is about 40 percent.

Japan is Ericsson's second largest market in Asia. Sales of mobile telephones in Japan are relatively mod-

est, with Ericsson's mobile systems accounting for 98 percent of sales.

Southeast Asia accounts for less than 5 percent of sales in the market area.

### LARGEST CUSTOMERS

Ericsson's 20 largest global customers (country of origin in parenthesis)

<b>AirTouch</b> (U.S.) <a href="http://www.airtouch.com">http://www.airtouch.com</a>	<b>SBC Communications</b> (U.S.) <a href="http://www.sbc.com">http://www.sbc.com</a>
<b>AT&amp;T</b> (U.S.) <a href="http://www.att.com">http://www.att.com</a>	<b>SingTel</b> (Singapore) <a href="http://www.singtel.com">http://www.singtel.com</a>
<b>BellSouth</b> (U.S.) <a href="http://www.bellsouth.com">http://www.bellsouth.com</a>	<b>Sonera</b> (Finland) <a href="http://www.sonera.fi">http://www.sonera.fi</a>
<b>BT</b> (U.K.) <a href="http://www.bt.co.uk">http://www.bt.co.uk</a>	<b>Swisscom</b> (Switzerland) <a href="http://www.swisscom.ch">http://www.swisscom.ch</a>
<b>Cable &amp; Wireless</b> (U.K.) <a href="http://www.cablewireless.com">http://www.cablewireless.com</a>	<b>Telecom Italia</b> (Italy) <a href="http://www.telecomitalia.it">http://www.telecomitalia.it</a>
<b>Deutsche Telekom</b> (Germany) <a href="http://www.deutschetelekom.de">http://www.deutschetelekom.de</a>	<b>Tele Danmark</b> (Denmark) <a href="http://www.teledanmark.dk">http://www.teledanmark.dk</a>
<b>France Télécom</b> (France) <a href="http://www.francetelecom.fr">http://www.francetelecom.fr</a>	<b>Telefónica</b> (Spain) <a href="http://www.telefonica.es">http://www.telefonica.es</a>
<b>KPN telecom</b> (Netherlands) <a href="http://www.knp.nl">http://www.knp.nl</a>	<b>Telia</b> (Sweden) <a href="http://www.telia.se">http://www.telia.se</a>
<b>Mannesmann</b> (Germany) <a href="http://www.mannesmann.de">http://www.mannesmann.de</a>	<b>Telstra</b> (Australia) <a href="http://www.telstra.com">http://www.telstra.com</a>
<b>MediaOne</b> (U.S.) <a href="http://www.mediaone.com">http://www.mediaone.com</a>	<b>Vodafone</b> (U.K.) <a href="http://www.vodafone.co.uk">http://www.vodafone.co.uk</a>

### LARGEST MARKETS

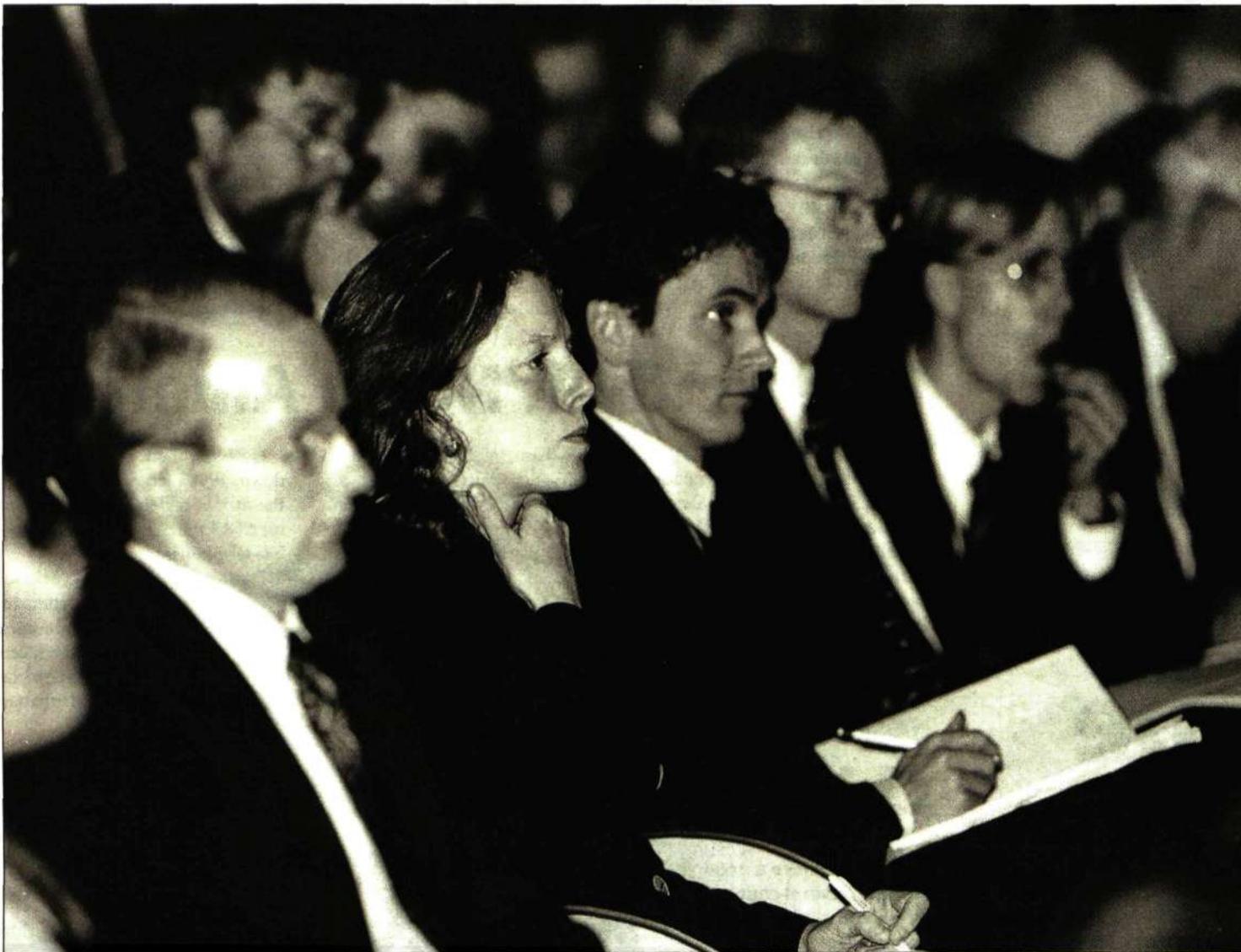
Ericsson's 10 largest markets



### LARGEST MARKETS BY MARKET AREA



\* The North American market area consists only of the U.S. and Canada, which qualifies for listing despite relatively modest sales.



The most critical readers of the Annual Report include financial analysts. They carefully follow all information about Ericsson. The photo shows a gathering of some of them at Ericsson's Capital Markets Days.

Photo: Ulf Berglund.

Stock market analysts are numbered among the most critical readers of annual reports. Contact met Raoul Grünthal, chief analyst at Nordiska Fondkommission, Stockholm, to ask for his opinions on Ericsson's Annual Report.

"Good, in general. Definitely better than last year, in the same class as 1996," was his assessment.

## Annual Report meets with approval

This year, the structure is clear and there is plenty of information. The features that made the 1996 report so good were thoughts about future developments, which were included in the Ericsson 2005 vision. These provided a very rewarding rationale about various prospects for the development of the sector. Although last year's version was interesting to read, it was not what analysts expect of an annual report," Raoul Grünthal explains.

A company of Ericsson's stature attracts considerable media coverage and is well analyzed by the stock market. As a result, their annual reports rarely reveal any real items of news. However, this is one of the few occasions when the Company is given a chance to circumspectively give its own views on Ericsson itself and on the industry as a whole.

"Information included in an annual report has added weight."

### More than marginal information

Ericsson is monitored carefully by the mass media and financial analysts. According to Raoul Grünthal, the items reported to the public are marginal information; that is, fragments that are only of interest at the time of release. This is the type of information that pays the salaries of journalists and financial analysts. However, it is seldom the case that more comprehensive descriptions of Ericsson are provided. That's why the Annual Report will always be needed, not least to find out the Company's

own view on matters, even if most of the information has already been unveiled in other contexts.

In Raoul Grünthal's opinion, the positive aspects of the 1998 Report include the fact that it is well structured and clear, and that Ericsson dares to talk about competitors and the sector as a whole.

"More companies should do this. Many of them are quite simply too cowardly," Raoul Grünthal says.

Analysts and the major shareholders already have a relatively good picture of the sector. But such information could be more useful to smaller shareholders who do not have the resources to make thorough analyses of their own. And even for institutional analysts, finding out Ericsson's interpretation of external conditions can be of interest.

Raoul also believes that it is positive that Ericsson assigned its own headings to matters of significance for 1999 and to financial objectives.

"This means that we don't have to look through the Chief Executive Officer's statement and other sections in order to work out Ericsson's standpoint."

Ericsson's page about personnel also satisfied Raoul's pass criteria.

"In annual reports, personnel matters tend to be a bit muddled and sketchy, but Ericsson's contains a clearly stated personnel policy, which also addresses such details as salary levels."

However, the Annual Report does not only receive praise from Raoul Grünthal. He also points to a few items that he would like to see changed.

The graphic design of the Annual Report differs in various ways from Ericsson's other publications.

"Minimalist works of art are becoming pretty commonplace in annual reports. If you don't look carefully enough for the title, it's difficult to see that you're reading an annual report from Ericsson. I really don't understand why the financial information department doesn't cooperate more with other marketing activities. This doesn't apply to Ericsson alone."

### Copies difficult to read

Another detail that irritates people who use annual reports professionally is the trend of having gray-toned pictures behind the text. This makes it very difficult to read, particularly if you want to make photocopies of such a page.

"Perhaps I'm too fussy, but for no apparent logical reason, graphic design sometimes seems to be assigned too much importance, at the expense of readability. Maybe my views are colored somewhat by my background as a journalist," Raoul Grünthal explains.



Raoul Grünthal

Raoul does not believe that the statistical section of Ericsson's Annual Report is very important. Some people could find this surprising.

"Of course, the figures are not irrelevant. But for a well-analyzed company like Ericsson, everyone already knows most of the statistical data. There's seldom much scope for any surprises in the statistics. The opposite is true for small companies – you have to read their statistical section very carefully," he says.

The situation was different during the Swedish real estate crisis in the late 1980s, however, when sensational news could often be hidden in a minuscule footnote.

The Annual Report was published at the beginning of March. No previous Ericsson annual report has been released so early.

"Publishing the report so early in March is very advantageous, since it arrives before the massive flow of other annual reports begins. Those that come later often seem rather old," says Raoul Grünthal in conclusion.

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The Annual Report is available in pdf format: <http://www.ericsson.se/reports/>

You can also visit the web site for the Annual Report: [http://www.ericsson.se/annual\\_report/1998/eng](http://www.ericsson.se/annual_report/1998/eng)