

# contact



Stockholm 4/9  
Ericsson  
B share,  
**180.00**

NO. 12 · SEPTEMBER 10 1998



Bicycle paths, railroads and telecommunication lines are all submerged in water. Ericsson is donating three specially equipped mobile systems to the hardest hit provinces. Photo: Pressens Bild

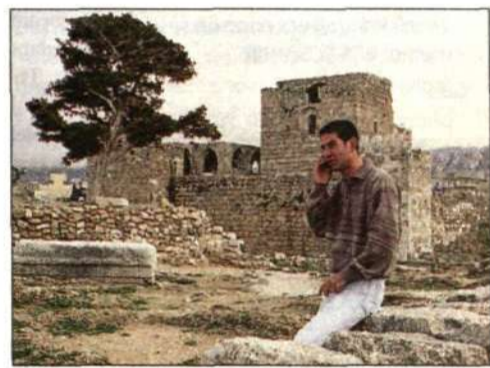
## Three GSM systems to a flooded China

China has been hit hard by recent floods, which have destroyed most of the infrastructure in the affected areas, including the telecommunications systems. This complicates relief work among the millions of homeless refugees. Ericsson has therefore donated three GSM systems to the country.

## Lebanon builds up its networks

Like the country it's located in, Ericsson's company in Lebanon has undergone some difficult times. The company has cut back its staff by 50 percent. Now, Ericsson is participating in the reconstruction of the war-torn nation's infrastructure. Due to the mountainous landscape, many fixed lines are installed with radio access. Read more about the market and Ericsson's activities.

15-17



## Special on partnerships

In the previous issue of Contact, the first part of a series was published on partnerships and how Ericsson's development is benefitted by alliances with other companies.

In this issue, you can read more about Ericsson's oldest partnerships, namely, with Texas Instruments in the area of component manufacturing. One of the latest is the renowned ad agency Young & Rubicam.

3

19-23

### NEWS

#### New office in London

Ericsson has purchased an office property in central London which will accommodate 350 workplaces. The premises were purchased in order to have more extensive representation in London.

3

#### Cisco – a role model

On the World Watch pages, Contact presents the American networking company Cisco. The successful company uses alternative leadership methods with a charismatic CEO at the helm.

10-11

#### 24-hour helpdesk

Questions are constantly pouring in at Ericsson's helpdesk. Not all of the callers are pleasant, but most receive quick assistance, regardless of whether it's how e-mail works or if their computer has crashed.

8-9

#### Something to think about

A less-than-impressive performance in a customer survey gave Ericsson in Bolivia something to think about. Two graduate students helped provide suggestions on how to change the organization.

13

#### It just keeps on ticking

The Centralograph from Ericsson since the 1930s keeps on ticking at the Swedish steel company Sandvik AB. They haven't found anything more modern that is better to replace it with.

24

## contact

The publication for Ericsson employees all over the world

### Publisher

Lars A. Stålberg,  
phone + 46 8-719 31 62

### Corporate editor

Lars-Göran Hedin,  
phone + 46 8-719 98 68,  
lars-goran.hedin@lme.ericsson.se  
memo: LME.LMELGH

### Editorial assistant

Lotta Muth,  
phone + 46 8-719 51 71  
lotta.muth@lme.ericsson.se  
memo: LME.LMEMUTH

### Editors

Patrik Lindén,  
phone + 46 8-719 18 01  
patrik.linden@lme.ericsson.se  
memo: LME.LMEPALI  
Mia Widell Örnung,  
phone + 46 8-719 41 09  
mia.widell@lme.ericsson.se  
memo: LME.LMEWIDE

### Editorial staff

Thord Andersson,  
phone + 46 8-422 03 16  
thord.andersson@ebc.ericsson.se  
memo: EBC.EBCTKAN

### Anneli Krantz,

phone + 46 8-764 15 96  
anneli.krantz@ecs.ericsson.se  
memo: ECS.ECSANKR

### Gunilla Tamm,

phone + 46 8-757 20 38  
gunilla.tamm@era.ericsson.se  
memo: ERA.ERACT

### Nils Sundström,

phone + 46 8-757 05 21  
nils.sundstrom@era.ericsson.se  
memo: ERA.ERANISM

### Lena Widegren,

phone + 46 8-719 69 43  
lena.widegren@etx.ericsson.se  
memo: ETX.ETXLAWN

### Niclas Henningson,

phone + 46 31-747 01 40  
niclas.henningson@  
emw.ericsson.se  
memo: EMW.EMWNIHE

### Address

Telefonaktiebolaget LM Ericsson,  
HF/LME/I, S-126 25 Stockholm  
fax + 46 8 - 681 27 10

### Distribution

Solveig Sjölund,  
phone + 46 8-719 41 11  
solveig.sjolund@lme.ericsson.se  
memo: LME.LMEKOCO

### Layout

Paues Media i Stockholm AB,  
phone + 46 8-665 80 72  
kontakten@pauesmedia.se

### Printed at

Nerikes Allehanda Tryck,  
Örebro 1998

### Advertising

Display AB,  
phone + 46 90-17 79 50

Do you want Contact, the English-language edition of Kontakten, sent to your home address? If you are on a limited assignment in Sweden that service is provided. Send us your name, home address, and the date you will leave your assignment to LME.LMEKOCO. You will continue to receive Kontakten. If you move, please send a memo with your new (and old) address, to LME.LMEKOCO.

# A letter to all the employees

This letter from Sven Christer Nilsson was published electronically on the intranet on September 1, 1998.

The management conference in San Diego is now only five weeks away. As you undoubtedly already know, the new strategy and new organization that will ensure that Ericsson holds a leading position in the New Telecom World will be presented at the conference.

Our industry and our customers are currently undergoing comprehensive change. Development and transformation in our sector is occurring at a pace which is probably unparalleled in any industry. Our work to formulate a strategy that takes advantage of Ericsson's strengths and collective expertise in the fields of markets, customers and technology should be viewed in this light. And to guarantee that the strategy is implemented successfully, we are creating a new organization and beginning to act in a manner that is adapted to the New Telecom World.

The new organization will serve as a tool in our efforts to act swiftly and forcefully. These are prerequisites if a world-leading company like Ericsson is to retain and strengthen its market position. And in the world of

the Internet, the future is arriving at an ever-faster pace.

When a company implements changes, employees inevitably feel some uncertainty and stress before all the pieces fall into place. I am also aware that, at the present time, five weeks must feel like an eternity for Ericsson employees. However, the work to develop the strategy, and the organizational review, is a particularly extensive process. It is essential that Ericsson's expertise and experience are utilized to the full and serve as key opening values in the process that will result in the strategy and organization. Work on the strategy and the organization commenced directly after I became President and CEO and is yet to be completed. In other words, a few issues and details still have to be resolved.

Accordingly, a little more time will be required before the manning process, that is the positioning of all key executives, has been concluded.

The conference at which Ericsson's 400 most senior executives will meet will be the starting point for a process of change that will have to be initiated immediately.

An internal information program will be put into effect directly after the conference. We also expect to hold a press conference after the

conference.

Comprehensive information regarding the items presented at the management conference, and about their implementation in the future, will be available on the Intranet. In addition, a special issue of Contact will be distributed during the week following the press conference.

It is essential that we maintain a high tempo and do not lose speed while waiting for the "new Ericsson" to take shape. Neither our customers nor our competitors will stand still to see the outcome of our internal work, nor will technological progress. In other words, major and immediate effort will be required from all of us who work at Ericsson.

Although our profit trend is strong, we are living in a world where changes mean that no successes can be taken for granted. What we must do now is to act and equip ourselves for the future. This will require a willingness to change on the part of all Ericsson employees. In return, we will create an Ericsson in which work results in personal development and in which personal effort and initiative will be recognized and assigned a high value.

Sven-Christer Nilsson

President and Chief Executive Officer

## The new Ericsson takes shape

- |                           |   |
|---------------------------|---|
| <b>April 1998</b>         | <b>Evaluation committee</b> appointed by Sven-Christer Nilsson to review the organization   |
| <b>Summer 1998</b>        | <b>Seminars and workshop</b> on the new Ericsson held at the executive management level.  |
| <b>Sept. 1998</b>         | <b>Recommendations for change</b> are fine-tuned.   |
| <b>Oct. 7-8</b>           | <b>Ericsson Management Forum '98</b><br>400 of Ericsson's top executives discuss the changes.   |
| <b>The following week</b> | <b>Press conference and internal information</b> on the main changes within the new Ericsson. The composition of the top executive management team and other information will be disclosed. Employees will receive information from their managers on a local level |
| <b>Oct-Dec. 1998</b>      | <b>Continued work</b> on the details regarding the new Ericsson. Information will be distributed locally as it becomes available.   |
| <b>January 1 1999</b>     | <b>The new organisationer</b> will be complete.   |
| <b>1999 - 2000</b>        | <b>Continuous change</b> with the company according to established guidelines   |

MP

## Ericsson exits Burma

Ericsson has decided to discontinue all business with Burma. The decision is the result of strong pressure from lobbying organizations, especially in the U.S.

"Ericsson believes that trade sanctions should be imposed by international organizations, such as the United Nations, and not by individual companies. There are currently no formal sanctions against Burma," says Ericsson's Senior Vice President of Corporate Relations, Lars A. Stålberg.

"The reason we are pulling out of the country is that the issue has reached such large proportions in the U.S. Our withdrawal from the country will most likely result in



The reason Ericsson is pulling out of Burma is that the issue has reached such large proportions in the U.S. Photo: EPA

one of our competitors taking over the business we have had up until now," says Ericsson's Senior Vice President of Corporate Relations, Lars A. Stålberg.

Special-interest groups have

pressured Ericsson to leave Burma because of the country's human rights abuses.

"Ericsson is also concerned about the human rights issues in Burma, but we do not believe that

our withdrawal will lead to any improvement," Lars A. Stålberg says.

"On the contrary, we believe that Ericsson's presence in various markets contributes to economic and social development," he concludes.

## Contact keeps close tabs on the Web

► Many people think that there is a conflict between electronic information and the printed page.

But this is the same sort of mistake made ten years ago when everyone referred to the paperless office just because word processing was gain-

ing ground. Those of us who work with Contact are not worried about what is happening in the IT world. We regard our magazine as a major force in the Ericsson culture, and we are using the Web to distribute up-to-the-minute news items, where electronic

media are superior to printed text. But sometimes, there is additional information available on the Web.

In situations of this kind, we will be trying to make life easier for the reader whenever possible by giving hints about where information of

this kind can be found. We will be using the "eye symbol" to indicate where you can find more information on the Web.



Lars-Göran Hedin

Corporate editor

# Equipment relieves China

Ericsson has donated three GSM systems to the Chinese provinces most affected by recent flooding. The systems are specially adapted so that they can, for example, be set up quickly in the event of a disaster.

"In some areas, telecommunications systems have been more or less wiped out, making rescue operations very difficult. All of the infrastructure not located on or above the second floor of a building in these areas has been completely submerged in water," says Jim Gill, manager of the regional office in Shanghai.

Three provinces are each receiving a GSM system. They include the province of Hubei, the one most affected by the floods, Jiangxi province, where agriculture has been greatly affected, and Heilongjiang province in the north, where oil fields are in danger of flooding, which would involve significant economic losses.

These fully operational systems are so compact that they each fit into a single container, making them easy to transport where they are needed most.

Ericsson quickly made the decision to donate telephone equipment. The contribution was announced on a disaster relief television appeal in the middle of August.

Less than two weeks later, the first shipment of GSM equipment was delivered to Wuhan, a city of



Most of the infrastructure, including roads, railways and telephone lines, is completely submerged under water, which is making it difficult to deliver food and other essential items to flooded areas in China. Photo: EPA

seven million, in Hubei province.

"I met with representatives for the authorities in Wuhan and they were very happy. Now they will have better coverage in the affected areas and have time to repair the damage," Jim Gill relates.

At the time of going to press, water levels were continuing to climb and there was an increasing danger that the protective dikes would not

be able to hold back additional flooding. A total of 240 million people have already been affected by the floodwater surges.

And, according to official statistics from the Chinese authorities, 13.8 million people have become homeless and over two thousand fatalities have been recorded.

"When I flew into Wuhan, I saw enormous areas around the city

that are submerged in water. It is difficult to comprehend, but so far the city is still functioning and people are going about their jobs. But it is clear that people are nervous. The water is now only 30 centimeters below the top of the protective dikes," says Jim Gill.

Mia Widell Örnung

mia.widell@lme.ericsson.se

## New employees can purchase convertibles

Staff recruited after the offer for employees to purchase convertibles now have an opportunity to participate.

When the personnel convertible issue was launched last autumn, Ericsson's subsidiary, AB Aulis, purchased convertibles to a value of SEK 1,125,000,000 for resale to new employees. This applies to personnel employed on a permanent basis after October 10, 1997 by Ericsson, Ericsson Project Finance AB, Aktiebolaget LM Ericsson Finans or their subsidiaries.

Only personnel employed after October 10, 1997 are entitled to buy convertibles from AB Aulis. You can purchase convertibles to a minimum value of approximately SEK 10,000 and a maximum of about SEK 75,000. It is possible to finance the purchase of convertibles through loans from Handelsbanken or SE-Banken.

The relevant legislation in different countries varies. This means that employees in countries other than Sweden must check whether it is permissible for them to buy convertibles.

Listing of the convertibles on the Stockholm Stock Exchange commenced on August 31, 1998, enabling employees to monitor prices in several Swedish newspapers.

Check with the Web or your local personnel department

http://inside.ericsson.se/converti

## Purchase of office property in London completed

Ericsson recently concluded the purchase of an office property in London.

The office building, which has an extremely central location on St. James's Square, provides a total floor space of 9,700 square meters, accommodating about 350 workplaces.

The building will be ready for occupation in the second quarter of 1999.

### Greater need

The reason for this transaction is that Ericsson considers that it needs to have more extensive representation in London – for close contacts with major customers, business partners, financial centers and markets.

Ericsson already has extensive operations in Britain, including research, development and manufacturing. Some departments from Ericsson's British subsidiaries will be moving into the new office at 1, St. James's Square.

### Additional operations

The need for additional operations in central London will be determined in the current organizational review. The results are due to be announced in mid-October.



The office building, which has an extremely central location on St. James's Square, provides a total floor space of 9,700 square meters, accommodating about 350 workplaces.

The "Heads of Terms," outlining the main conditions of the deal, have been signed with NatWest Group Property. There is nothing to indicate that the re-

maining formalities will not be approved.

Patrik Lindén

patrik.linden@lme.ericsson.se

## IN BRIEF

### Ericsson Cables enters new phase

Ericsson Cables is launching package solutions for distribution fields – the equipment which links cable networks with exchanges and transmission equipment. This involves system solutions comprising customized cable and network products. The new solutions are easy to dimension and order. Installation time is reduced considerably, in some cases up to 90 percent. In addition, the solutions are tested in the manufacturing process and delivery lead-times are short.

"This leads to a reduction in the customer's overall costs, and that was the aim," Lena Moberg, product manager, explains.

"This is one result of entering into a new phase at Ericsson Cables, in which we are upgrading ourselves from a component supplier to a supplier of concepts and total solutions for cable networks," says Kurt Hamrin, marketing manager of Network Products for Ericsson Cables.

### Remote upgrading of exchanges

New software makes it possible to upgrade telecom exchanges from a remote location. Ericsson has developed this method in Norway, in cooperation with Telenor, the Norwegian operator.

"This technique gives subscribers rapid access to new telecom network services. It used to take several months to install new software in the Norwegian GSM network, but now you can do it in a few weeks," says Steinar Svalesen, Ericsson's Norwegian marketing manager.

Ten exchanges can be upgraded simultaneously from a control room at Ericsson's premises.

### Fixed network contract in Brazil

Ericsson recently sold Advanced Access fixed-network equipment to two operators in Brazil, Telesp and Companhia Telefonica da Borda do Campo. Both companies have recently been acquired by Telefonica of Spain in the ongoing deregulation process in the Brazilian telecom market. The contract involves delivery of equipment for 80,000 lines in the São Paulo area. Ericsson's digital "pair gain" technology will be employed. The other contract is for process equipment for a solution involving the use of fiberoptic technology and SDH in the Santo Andre area.

In this case, 60,000 new telecom lines will be installed.

### Agreement signed in Mexico

Ericsson signed a frame agreement, valued at USD 300 million, with Telcel to build Mexico's first 1900MHz wireless communications network and expand their 800MHz network. Telcel, Mexico's largest wireless network operator, will construct a nationwide dual-band/dual-mode (800MHz/1900MHz, analog/digital) network employing their new 1900MHz licenses recently won in each of the nine Mexican regions.

Telcel's wireless network has been in operation since 1989 and has an existing subscriber base of 1.6 million. Over fifty percent of the subscribers use the prepaid service which has been one of the key contributors to the rapid subscriber growth.

# Mobile Systems takes over production of new AXE

Since June, the Mobile Systems business area has been responsible for production of the new AXE exchange. It is manufactured in Östersund by Ericsson Utvecklings AB and at Ericsson's plant in France.

"Shipment delays, which have affected the new AXE program, are now being corrected. June was a good month and production in July was higher than ever. Even August is shaping up to be a good month," ex-

plains Björn Boström, senior vice president of production at Mobile Systems.

## Difficult to meet demand

The new hardware construction, which forms the heart of the AXE exchange, is the same both for mobile systems and for the fixed telephone network. The main problem has been the great interest in the market for this exchange and the difficulty in manufacturing it in sufficiently large quantities.

A task force was put together at the beginning of the summer to review manufacturing. The chairman of this group, Björn Boström, says that there are currently four areas being focused on. The first of these includes projections, orders and deliveries, while the other three are suppliers, logistics and support systems.

The new exchange is being manufactured in Östersund and at Ericsson in France. As of this summer, certain parts of the exchange are al-

so being manufactured at the Ericsson Radio Systems plant in Katrineholm.

## Final testings

Just as in the manufacturing of radio base stations, final testing of AXE exchanges is done at the plant before delivery.

Testing facilities are being built both in Östersund and Katrineholm, as well as at Ericsson's French plant in Longuenesse.

Work inside of the Mobile Systems

business area is based on a concept known as 'the model plant'.

This virtual plant is a collection of management philosophies, systems and processes that work to support the Mobile Systems production strategy.

Today, all Mobile Systems plants operate using the 'the model plant' philosophy. Now the concept will also be introduced at the plants in Östersund and France.

Gunilla Tamm

gunilla.tamm@era.ericsson.se

# Japan ready for MINI-LINK

The world's largest mobile telephone operator, NTT DoCoMo of Japan, has plans to construct a network using radio links.

Ericsson's MINI-LINK is one of the systems currently being evaluated for a future deal.

"It would be a major achievement if we managed to get NTT DoCoMo as a customer," says Dennis Andersson, marketing manager for the Japanese project.

Today, DoCoMo rents transmission lines for communication with the fixed telephone network and between base stations within their own mobile system's cells. Leasing costs

for the lines are high and in order to lower costs, the Japanese operator is now planning on building its own network using radio links for wireless communication.

## One of several systems

Last autumn, NTT DoCoMo invited a number of manufacturers to a discussion regarding a future radio link network. Among the systems that the Japanese operator wanted to evaluate was Ericsson's MINI-LINK.

"Most likely, we are the only foreign manufacturer who has been invited to participate in the discussions," says Dennis Andersson, marketing manager for the Japanese project.

Following numerous meetings with the Japanese operator, the Radio Link unit received an order for a test system, delivery of which to Japan began in March of this year. Since then, NTT DoCoMo's product advisory committee has approved the MINI-LINK concept and is currently involved in discussions with Ericsson regarding the technical specifications of a MINI-LINK radio adapted to Japanese conditions.

"It is a major achievement to have come this far," says Dennis Andersson.

"Despite our strong position in the world market, we have not sold MINI-LINK in Japan to any great extent. It would be a major break-

through to get NTT DoCoMo as a customer, and considering the operator's size with over 20 million subscribers, we see enormous potential in any eventual deal."



Dennis Andersson

## Very demanding

Discussions with NTT DoCoMo have placed significant demands on the Radio Link unit. Japanese operators, in general, and NTT DoCoMo in particular, are considered to be very demanding with very

rigorous demands on their suppliers.

In its contact with the Japanese operator, the Radio Link unit has had a great deal of help from Ericsson's Japanese subsidiary as well as Ericsson Microwave's unit for base stations which works exclusively with NTT DoCoMo and knows the Japanese customer well.

If Ericsson Microwave and NTT DoCoMo come to an agreement on technical specifications for the Japanese MINI-LINK system, the Radio Link unit will have ten months to develop a commercial product.

Niclas Henningsson

niclas.henningsson@emw.ericsson.se

# New media relations manager from Nokia

Nina Eldh recently assumed the position of media relations manager for the Mobile Telephones and Terminals business area.

She was previously a corporate information manager at Nokia.

"My most important task will be to continue to build good relations with the market and the press. As well as to increase internal awareness of the role of the press in society, and the key role the press plays in terms of promoting the Ericsson name," says Nina Eldh about her future tasks.

## Important to coordinate

"Working with the press must be seen as a part of marketing. Some companies have a tendency to believe that advertisements are the most important. But many times, it is editorial text that increases confi-

dence in the company. It is important to coordinate communications with the media, advertisements and trade shows, so that taken together they will be more effective and believable," she continues.

How is Mobile Telephones and Terminals viewed in the media today?

"It isn't the business area that should be visible, but rather its products. The average person on the street only sees Ericsson. That is why there should only be one advertiser, namely Ericsson."

In terms of being seen in the market, she believes that there are many similarities between her old employer Nokia and Ericsson.



Nina Eldh

"From an international perspective, both companies garner great respect. Nordic companies are often held in great respect throughout the world and I also believe that such is the case for us. Since I will be working internationally, I want to add that trait to Ericsson's media image."

## United on many issues

"Of course we are competitors, but the image of Ericsson and Nokia is also that we are united on many key issues. Third-generation mobile telephony is one example."

What will you tackle first?

"At the moment I am immersing myself in the company so that I can decide, as soon as possible, where we should begin and how we should structure the work. I am talking with my colleagues during these first weeks."

Gisela Zeime

# Many readers wondered about job exchange

A couple of issues back, there was an article in Contact about an internal Ericsson job exchange program in Bilbao.

We received many questions about it. Not least of all because we printed an incorrect Web site address. In other words, we have some more explaining to do.

The program is an initiative of Ericsson in Bilbao. It is directed, primarily, at Ericsson's units in Linköping, Carlton and Basingstoke in the U.K., and Nürnberg in Germany. In the near future, Ericsson in Kumla and Kista as well as Lynchburg and Raleigh in the U.S. are expected to join the program. There is a local contact person in these locations, and their names can be found on the Web.

"In time, we want to incorporate

as many portions of Ericsson as possible, but at the moment we are having a difficult time handling any more," says Sergio Ezama who oversees the project in Bilbao.

On the Web site, you can see which people are prepared to temporarily exchange workplaces and jobs. Positions available include purchasers, administrators and accounting personnel. A number of positions are, however, technical jobs such as machine product engineers, network administrators and processing engineers.

Patrik Lindén

patrik.linden@lme.ericsson.se

http://sparrow.ericsson.se/hhrr/Exchanges/

(That should be the correct Web address for more information about the exchange program.)

# Compete with your ideas

**You now have an opportunity to influence Ericsson's future product range. The Switching unit within Infocom Systems has announced a competition whereby an idea for a new product could win you a trip to Venice.**

Called "Innovation Challenge," the competition is open throughout September.

"This is an excellent opportunity to realize your ideas," says Magnus Braxell, head of Innovation Management within Public Networks.

The idea could relate to a new product or business opportunity, preferably outside today's core op-

erations, and should focus on new customers and markets. You do not need to submit a complete business plan, but your idea should indicate clearly how customers should be reached.

## Why Ericsson?

The competition is open to everyone. Use the application form shown on the Innovation Management web site (see below).


In addition to realizing their new ideas, competition participants can win a weekend trip for two to Venice.

One question that may be asked is: why should you develop your idea within Ericsson, instead of starting a business of your own?

"The question deserves to be asked, but we are convinced that if an idea is good enough to get into the Ericsson product portfolio, it will stand a greater chance of success if it is backed by the resources at Ericsson's disposal, for example

our customer base and extensive development resources," says Braxell.

Anne Lehes Löwenberg

 [http://pn.ericsson.se/x\\_s/img](http://pn.ericsson.se/x_s/img)

## RULES

The competition runs from September 1 through October 1, 1998.

- Ideas should be submitted in the format presented on our web site.
- The idea should be described within a maximum of 5 pages.
- The idea should fit within the

Infocom business area of operations and should focus on new markets and/or new customers, preferably outside today's core operations.

- The ideas will be registered in the name of the originator(s).
- The results of the competition will be published at the end of October.

## HELLO THERE



## Mats Köhlmark

**As manager of the new IMT-2000 project unit within the Mobile Systems business area, Mats Köhlmark has overall responsibility for the third generation mobile telephone system, until such time as the first system is in operation.**

### ► Why has a special project group been formed?

There are two main reasons. The first is to ensure that the appropriate focus is placed on the work being conducted on the third-generation system. The second is that by creating product units within the project, we now generate stronger synergies in the technical development area between our different business units for mobile telephone systems.

The GSM, NMT and TACS business units have efficiently functioning product units, with clear areas of product responsibility and we want to make use of this type of experience. The IMT-2000 project unit, which commenced operations on July 1, reports directly to the President of Mobile Systems, Kurt Hellström.

### ► How many people work on the IMT-2000 project?

There are more than 700 of us in Sweden, mainly based in Kista. Many Ericsson subsidiaries are also involved in the development work and with the experimental systems. Ericsson has already delivered these latter to Japan and others are in progress destined for other countries. Cooperation with Ericsson Mobile Communications to produce terminals for the third-generation mobile system is naturally very important. When the total project is finally constructed, units outside Mobile Systems will also become involved.

### ► This is your third major project for Mobile Systems.

That is correct. The first was the GSM project in Germany in 1991 and the second was the PDC project in Japan in 1994. The current project is bigger and tougher than either of the first two. The third-generation system is based on GSM and that makes the potential market much larger than when GSM first started.

### ► How do you view the autumn?

Both stimulating and difficult. Although ETSI has recommended Ericsson's WCDMA solution for the third-generation system, other standardization organs have yet to state their views. That is why we need to approach all standardization issues in a coordinated manner. We have delivered test systems, but now we also have to produce commercially viable products.

Gunilla Tamm

[gunilla.tamm@era.ericsson.se](mailto:gunilla.tamm@era.ericsson.se)

# Expansion order from Curaçao

**Recently, Ericsson secured an order to expand the capacity and coverage of the mobile telephone network in Curaçao.**

It is nine years ago since Ericsson obtained its first mobile network order for the Southern Caribbean island of Curaçao. At that time, the order was for an AMPS standard analog system. Two years ago, Ericsson was selected to upgrade

the network to the D-AMPS standard. Now, an order has been received to expand the network.

The customer is Setel, Servicio de Telecomunicacion, which today has 15,000 subscribers in its network, about 10 percent of Curaçao's population.

## Increasing demand

"The increasing number of subscribers means that there is a need for greater coverage and capacity,"

says Mats Skoglund, customer service manager for Mobile Systems' operations on the island.

During the spring, Ericsson and Setel performed a joint analysis of the mobile telephone network and its traffic.

This subsequently led to Setel making its largest investment to date. In June an expansion contract was signed, which included base stations, increased exchange capacity, operating and monitor-

ing systems, net planning and training.

## 60-year presence

Curaçao, which belongs to the Netherlands Antilles, is north of Venezuela. The operator, Setel, has a monopoly position, but the telecom market is expected to be deregulated in 2000. Ericsson first conducted operations on the island 60 years ago.

Gunilla Tamm

# British network now fully digital

**After six years and at a cost of GBP 27 billion, U.K. operator BT recently completed the modernization of its local telecommunications network.**

Known as the Local Exchange Modernisation Programme (LEMP), the upgrade was carried out with the help of Ericsson's U.K. company.

This means that BT's local network is now virtually fully digital. Ericsson can congratulate itself on

having ten million subscriber lines installed in the BT network. This corresponds to about one-third of the total network.

The event was celebrated at the same time as one of the last AXE stations was digitalized in the small south-coast town of Leigh-on-Sea in the U.K.

Representatives from both BT and Ericsson Ltd were present. The companies have cooperated since 1971.



**U.K. operator BT recently celebrated the completion of the modernization of its local telecommunications network, which is now almost fully digital. Ericsson delivered much of the equipment.** Photo: Great Shots



# Triple 8 makes the Internet mobile

**Currently, Ericsson's most technically advanced mobile telephone to date is being marketed under the campaign theme, "SH 888 makes the Internet mobile".**

Using TV, newspapers, in-store promotions and the Ericsson web site, the new SH 888 is being positioned as the most advanced high-tech mobile phone in the world.

A prime target group for the new telephone consists of "achievers," who are perceived as hard-working, technically oriented individuals who regard their jobs as being part of their private lives. Another important group, "pioneers," consist of individuals who are influenced by status, design and strong brands.

The triple 8 is Ericsson's first GSM dual-band telephone. It functions on both 900 and 1800 mega-

hertz frequencies. Users will notice this because it is easier to get through when many people are calling simultaneously at peak times on the network. It also benefits operators, who are provided with greater network capacity.

The integral PC card and infrared port make the SH 888 an effective tool for traveling businessmen. No cables are needed to connect their portable PCs with the triple 8. Wherever the user is located, it is always possible to link up with the Internet and to send and receive e-mail messages.

Marketing campaigns are currently in progress in Europe, the Middle East and Africa.

Gisela Zeime

 [www.mobile.ericsson.com/sh888](http://www.mobile.ericsson.com/sh888)

## EDITORIAL

Sten Fornell

sten.fornell@era.ericsson.se



## Growth has advantages

When Ericsson's six-month interim report was published in July, the stock-market reaction was quite negative, despite very strong earnings. Earnings were well on a par with market expectations, but growth was considerably lower than what the market had expected for certain parts of Ericsson's operations.

The market's appreciation and valuation of Ericsson is influenced by several different factors. In a growth industry such as ours, our ability to create growth is probably the single most important factor.

Within Mobile Systems we reported yet another quarter of strong growth. In the first half-year, invoicing rose by 20 percent and order bookings by almost 30 percent. We have succeeded in producing such growth figures steadily during a very long period – the past 15 years. Can we really continue to grow like this even in the future? Is it possible? The answer is that, yes, we will continue to produce strong growth figures in the future as well. We will grow as long as we want to create growth. The external circumstances are favorable. The number of subscribers is steadily rising, call lengths are increasing and new areas of application are appearing. The transfer of subscribers to fixed telephony, mobile data and wireless access to the Internet will provide an extra boost during the coming years. Wireless communication will find new areas of application that, today, we have barely begun to consider.

The challenge for us is to create a situation where each and every employee feels maximally motivated to contribute to continued growth.

The advantages of growth are obvious – a constant stream of new challenges that demand that we quickly absorb new knowledge and acquire new skills, good career and development possibilities and, last but not least, the opportunity to participate in the company's value growth, as owner of shares or convertible debentures.

The advantages are so obvious that we should now be able to mobilize all the strength, courage and flexibility required to counter growth-inhibiting tendencies. Too much inward focus on the company instead of outward toward the customer, the market and the competition. Overconfidence in all-inclusive planning strategies. Everything that is unnecessarily complex and involved. Considering the company's current characteristics of size, high technology and rapid change, it is extremely complex in itself. That is precisely the reason why it is essential for us to try to continually simplify our ways of working.

We need more market economics inside the company and less plan economics, more scope for personal initiative and less coordination.

More entrepreneurial spirit within the framework of the large corporation.

More units and more people with budget responsibility and the capacity to easily measure their own results.

We must also be concrete and clear. The challenge right now is to succeed in reaching this year's growth objective. We have an exciting half-year ahead of us.

Sten Fornell is the Executive Vice President and Chief Financial Officer at Mobile Systems



The organization for GSM on the Net functions as a complete small company. In the foreground, right: Niclas Forsvall, manager of the organization, who will go on paternity leave in the autumn. To be replaced by Jan-Erik Stjernvall, who is currently head of product management for GSM base-stations. With GSM on the Net, the signaling units from the MSC (Mobile Switching Centre) and the BSC (Base Station Controller) are hosted on a single server. Here, project manager Åsa Boklund, marketing manager Bengt-Åke Ljudén and Nedim Hodzic at project management in Kista show off a demo system using the new concept.

Photo: Anders Anjou

# Innovation cell leads development

**Ericsson is leading development in the integration of speech over the Internet with GSM. The work takes place in a new independent organization with total responsibility for the technology referred to as "GSM on the Net".**

Overview, speed and market awareness are the key words. The GSM on the Net organization is the latest example of what is known as an innovation cell within the Mobile Systems business area.

Housed in an airy office landscape in Kista, the GSM on the Net's system-management staff, product managers, marketing department, and project management have total responsibility for the system's integration and verification. The organization involves a total of about 30 people, and it is growing.

### "Like a complete company"

"We're like a complete little company. This more independent way of working has been essential for us. We would never have succeeded as a project, where people tend to be preoccupied with their own organization," says Niclas Forsvall, manager of GSM on the Net.

GSM on the Net began in autumn 1997 on the initiative of Bo

Bergström, manager of the GSM base-station product unit.

An analysis of the threat posed by the computer industry made the message clear:

Ericsson had to work with mobile telecom systems for IP-based networks in order not to be left in the dust by fleet-footed computer companies.

"The pre-conditions for our solution are fewer base-stations, speech via intranets, a growing LAN market and the expansion of the GSM market and the potential for faster data transmission," says Niclas Forsvall.

### Idea launched in June

The idea was launched at the end of June in Stockholm and Rome. In the autumn, GSM on the Net will be shown at several trade fairs in Asia, Europe and the U.S.

Several test systems will be installed in the first quarter of 1999, and a commercial product is expected to be completed during the second half-year.

"We are primarily addressing mobile-telecom operators who are interested in offering business solutions and Internet service," explains Bengt-Åke Ljudén, marketing and product manager.

GSM on the Net integrates GSM technology with the Internet protocol by cost-effectively using a

company's computer network – its LAN – as a shared infrastructure.

This creates a total solution for a company's telecom and datacom needs. The technology is based on the H323 standard for multimedia and GPRS data-packet technology (General Packet Radio Services). The caller can use the same phone for both local and global mobility, while mobile-phone calls within the premises become cheaper.

The concept also facilitates easy switching between different access methods – GSM, fixed telephony, IP telephony or multimedia telephony – according to the users needs.

"The real potential, however, lies in the new services that can be developed and that integrate telecom and IT. As a simple example, the user can connect to a phone call while surfing by clicking the telephone icon," says Bengt-Åke Ljudén.

### Responsibility

The development work is carried out with assistance from design centers throughout Ericsson – from Umeå, Stockholm and Linköping to Oslo and Dallas. Each unit is responsible for ensuring that its component will function with the rest of the system and consequently has its own system-management team and responsi-

bility for integration and verification.

"The advantage of acting as a small company is that we have been able to start the design work earlier. A great deal of coordination is involved – at the same time," says Niclas Forsvall.

"We have given the designer units greater overall responsibility, which shortens lead-times and increases employees' motivation."

### Likely to be spread

The work method called innovation cell – that is, operating as a small company – will no doubt become increasingly common at Ericsson and within the Mobile Systems business area.

An innovation cell can be created through new innovative ideas or via operations spun off from existing organizations," says Jöran Hoff, vice president strategic business-development manager at Mobile Systems, and a member of the management group for GSM on the Net.

"We try to create more small units within the business area, that will allow us to come closer to the market with our entire operations. These are self-run units that create greater motivation and flexibility toward changes in the market."

Nils Sundström

nils.sundstrom@era.ericsson.se

# Flexibility in the speech coder of the future

**Mobile-phone users are becoming increasingly sophisticated. Not only will the broadband mobile phones of the future bring new possibilities for data communication, but natural speech quality will also become an important competitive tool.**

**The research at business area Mobile Systems department is conducting development and standardization of speech coders for the mobile telecom systems of the future.**

The Audio and Visual Technology Research department in Kista (Stockholm) is involved in both speech and image processing. Some twenty people are working with colleagues in Nürnberg and Luleå to develop speech recognition, speech coding, echo cancellation and video coding.

The projects are conducted in close cooperation with the Mobile Systems and Mobile Telephones and Terminals business areas.

The recently developed speech coder, AMR – Adaptive Multi Rate, is one of five proposals now being evaluated by the ETSI standardization organization, for future GSM systems.

The proposals will also be tested for the next generation of UMTS – Universal Mobile Telecommunication Systems.

## Flexible speech coding

The Ericsson system allows the GSM operator the flexibility to increase either speech quality or network capacity.

"We already have very good speech coders. This is another way to

improve them further, a way that gives operators who choose this technology an advantage," says Erik Ekudden, who is in charge of the AMR project.

There are currently three speech coders for GSM: Enhanced Full-Rate (EFR), which produces the best speech quality, Full-Rate (FR) and Half-Rate (HR), which can be used to increase network capacity. The advantage of the AMR speech coder is that it has the same high quality as EFR but an even more "robust behavior".

"During a call, the new speech coder constantly changes the bit rate for coding, although this is imperceptible for the user. This creates more robust behavior when cover-

age is poor, for example at the cell edge," says Erik Ekudden.

Utilization of spectrum resources is a matter of balancing quality and capacity, and this means that the GSM operator can also increase network capacity with AMR.

"The ETSI requirement is that it must be possible to implement the speech coder in a GSM system via cost-effective upgrades of the software in the base stations and the switches," says Erik Ekudden.

## WCDMA system

The AMR speech coder is also intended to be used as a component of the Ericsson WCDMA system. This technology is based on the flexible bandwidth of the WCDMA

system. The operator can adjust quality and capacity by controlling the bit rate of the AMR speech coder.

The work of establishing specifications will continue in 1999.

"We are now working intensively with the final specifications for the speech coder for the next GSM system version," says Erik Ekudden.

By the end of September the specifications are to be complete, and the five speech coder proposals evaluated by ETSI. The speech coder that ETSI chooses will be released in a specification package in February 1999.

Nils Sundström

nils.sundstrom@era.ericsson.se

## Digital sound transformation

**Compression of speech signals plays a key role in the digital process – and in the overall performance of mobile systems. Extensive listening tests are therefore being conducted to develop new efficient speech coders.**

A total of approximately 250 people have been involved in the subjective listening tests conducted in the spring to test the new AMR speech coder. The test methods are carefully formulated to allow standardization of results for comparison with speech coders from other manufacturers. Knowledge gained in recent years about compressed speech and human hearing have resulted in significant improvements in the sound

quality of mobile telecom systems.

"Today's speech coders are four to eight times more complex than those that existed when the GSM Full-Rate was standardized," says Erik Ekudden.

Speech coders have become more robust in their handling of various signals – from different types of human voices (male, female, child) to background music, noise, etc.

In a special sound laboratory, the research department has conducted pre-studies to develop the

mathematical formulas on which the algorithms for speech coding are based. These are specified using a high-level programming language. The final software for the digital signal processors is then produced by the business units.

"Our lab is unique in that we have a computer system that can perform testing in real-time using the high-level code, thus eliminating the time-consuming task of low-level programming. This means we can listen to the result directly," says Mats Folkesson, who together with Gunilla Berndtsson has been working with the listening tests in Kista for the new AMR speech coder.

Nils Sundström



Agneta Birkenstrand.

## HELLO THERE



## Tomas Hillås

**New marketing manager at Mobile Systems Japanese Standards.**

► **Welcome home. How many years have you been working in Japan?**

"Just about six years; the first two as head of Ericsson in Osaka and the rest as company manager of Ericsson Toshiba, based in Yokohama."

"I enjoyed living in Japan, but now it feels right to move back home. A lot of things have happened at Ericsson during the years I've been working in Japan."

► **On July 1, Nippon Ericsson and Ericsson Toshiba merged into Nippon Ericsson. Why?**

"In terms of the customer interface, it's better to have one Ericsson company."

"The merger strengthens the organization and facilitates the gathering of resources, which is essential for the upcoming work on IMT-2000, that is, the third-generation mobile system."

"In order to recruit and train competent technicians, research and development must be concentrated in one company."

► **How many employees does the Japanese unit's marketing department have in Kista?**

"We total about 60 people, and I am succeeding Hans Jarne, who is now the marketing manager of the IMT-2000 project unit."

"We are fully occupied, since the Japanese market is continuing to grow as much as before."

"July was an all-time high for our CMS-30 system, and our customers have now begun to attract subscribers from NTT DoCoMo. Apart from working with our present customers, we are also working on tenders for the third generation."

► **What have you learned from your years in Japan?**

"Quality-mindedness and the Japanese way of thinking through all the details before you start something new. Another very useful ability is to show humbleness toward the customer. I believe this holds not only for our customers in Japan but also in many other markets."



Erik Ekudden and Mats Folkesson at the research department of Audio and Visual Technology Research in Kista (Stockholm) are developing speech coders for the mobile systems of the future. Using extremely fast computers they create a simulation environment for testing of real-time sound with various algorithms.

Photo: Kurt Johansson

"LAN center. Åsa speaking."

Åsa Söderberg answers another call to Ericsson Data's local helpdesk in Västberga, just outside Stockholm. She is one of the 30 friendly voices who helps callers, solves their problems, finds answers or refers to them proper sources when they run into difficulties with their computers, software or connections.

## There's always someone who will listen

When she answers the next call, she has no idea what's about to happen. The office is buzzing with the murmur of voices. At workstations with blue screens, double-computer installations and dim lights, 30 employees at the helpdesk in Västberga are hard at work. An equal number of helpdesk employees are located in Kista.

Their objective is to answer 75 percent of all questions from callers within two minutes and solve 80 percent of their problems immediately. Many of the calls are characterized by a cry for HELP, as in helpdesk.

"I have not been assigned a pin number for my racom connection."

"I can't open an e-mail message. It's too big."

"My laptop was in for repairs, and I didn't get the case and cord back from the shop. How do I go about retrieving them?"

Åsa Söderberg sees the name of every caller on her screen. She also has access to the caller's department, city of employment, memo identity and e-mail address. She immediately knows which technician was involved. Her reply to the caller without case and cord is:

"I will e-mail the technician and ask him to return the equipment as soon as possible."

### Information prevents problems

She forwards the call to the technician's group so there are no delays if the technician in question is not available at this time.

"When systems or applications for Ericsson Standard Office Environment (ESOE) are upgraded via the network, many people call the helpdesk. In many cases, it's their own settings that prevent the upgrades," Åsa says.

To counteract the situation, she often re-installs the entire package via the network.

When the system, server or a network goes down, the helpdesk receives a large number of calls.

"We are not able to rectify situations like that, but we inform callers that repairs are in progress and tell them approximately how long it will take before everything is back online."



Åsa Söderberg

Information has become an important tool in preventing problems. Persons who will be affected are also notified in advance when a shutdown is planned for whatever reason.

Åsa Söderberg switches back and forth between two functions at the helpdesk: Frontline, when she answers the questions of callers, and Back Office, in her capacity as a systems and applications expert in the Ericsson Business Networks unit of the Infocom Systems business area.

Everybody at the helpdesk has their own special areas of expertise, such as e-mail or other systems.

"Special qualities are required to work the helpdesk, in addition to technical expertise," explains Anna Lundstedt, manager of the helpdesk unit in Västberga.

### World-class service is the goal

A positive approach to the needs of other people, in addition to the ability to work under pressure and constantly changing conditions are important, as well as a service- and customer-oriented outlook combined with a flexible and analytical mind.

"Without those qualities, I don't think you would enjoy working here," says Anna Lundstedt.

Even with such skills, it can be a trying job if the customers are angry when they call.

"Sometimes, we get a thorough berating. I've been on the verge of tears more than once. I find some consolation, however, in knowing the problems are not my fault."

The odd swear word has certainly also been heard after some calls.

Local helpdesks cannot solve the problems of all callers. Occasionally, a technician has to be sent to the site to rectify the situation.

At other times, local experts are brought in to deal with problems such as e-mail and important systems and programs, such as SAP R/3, or infrastructure experts for networks, servers and operations.

When the helpdesk in Västberga closes at 8:00 p.m., Ericsson Data's global helpdesk takes over to offer 24-hour service.

Ultimate responsibility, however, always lies with the first point of contact – the local helpdesk.

Ericsson Data's goal for all helpdesk units is to offer its customers world-class service standards.



Åsa Söderberg works at one of Ericsson's helpdesks. When your computer presents a problem, it is people like Åsa who take your calls and try to help.

Photo: Peter Nordahl

Lennart Edberg works with strategies and architectures within the framework of the Ericsson Global Infrastructure Program.

"It should only take one phone call for customers to receive the help they need, defined as entry into our message processing system that refers the problem to required sources of expertise – if the first person to answer the call cannot solve the problem," he explains.

There are more than 100 helpdesks in operation today throughout all parts of Ericsson.

"We are now in the process of establishing uniform service standards based on global cooperation."

### Simplified updating and maintenance

The foundation will be predicated on three important points: a uniform mode of operations, agreement on the level of basic services and a common toolbox for solutions.

The toolbox will include Ericsson's global database of knowledge and all approved solutions now under development.

"Fewer operational units based on three operating, expertise and support centers in Stockholm, Dallas and Kuala Lumpur will help to create more effective operations and simplified updating and maintenance."

Local helpdesks will be developed into regional support or solution centers to serve as the first contact point for customers. They will offer support for Ericsson's main systems and programs as well as global infrastructure services.

A global support organization will stand behind the regional centers, offering service 24 hours a day.

Aaron Haynes was named recently as support manager in Stockholm. He comes to Sweden from Dallas with considerable experience in this rather futuristic mode of operations. It's totally immaterial where the support team is situated.

"We have to use our systems and networks to meet our commitment to global support around the clock. The service is vital to our customers," Aaron Haynes says emphatically.

The development of services will be coordinated with Ericsson Data's global support unit, or Global Service Provider.

### Spearhead with local tools

Global helpdesks are responsible for support in terms of infrastructure, which includes network operations, computer runs, servers, domains and platforms. The Helpdesk Competence

## Simple to access the Net

It should serve as a Web site users can access to shop, play games, find trivia questions, chat, retrieve information and attend courses. It's all about Zopps, the Web site for Ericsson employees and their families.

"Zopps is meant to be enjoyable and easy to use. It will be similar to other gateways such as Excite. The new Web site will serve as a forum for learning about new technologies and communication," says William Agostini, the responsible for Zopps.



William Agostini

"In today's modern telecom world, it's important that every individual is familiar with Internet. We have to start thinking in new channels. The Internet will become a part of our everyday lives, part of our home life. Zopps and similar concepts help to show the world that Ericsson is not only adept at manufacturing boxes; the company also has original ideas and the ability to think in terms of applications."

Zopps, a global Web site in the English language, will be introduced at the Internet World Fair in the U.S. on October 5-9, 1998. Using a password, Ericsson employees and their families will be able to access the Web site. Regional versions of Zopps will also be made available in the local languages of different countries. The Web site's contents will be changed and upgraded constantly.

"Employees will be able to express their opinions about what should or should not be available at the Web site. It will be a 'live' site, constantly questioned and renewed."

The Web site for Ericsson employees will also serve as a global meeting place.

"One of the problems with Ericsson is that we have worked in small groups as a small company for a long time. Today, however, we are part of a very large Ericsson, a recognized trademark and brand name. Zopps will help us build bridges to span cultural gaps and unite various professions, business areas and age groups."

Zopps will also be used as a forum and a testing ground for new products developed by Ericsson.

"We work closely with the Internet Group at Ericsson's Infocom Systems business area, and its feasible that Ericsson employees and their families will be asked to test products for voice transmissions over the Internet, for example, and submit their viewpoints on potential areas for improvement before the product is introduced on the open market."

"The concept would provide rapid feedback and enable Ericsson employees to become accomplished Internet users familiar with the very latest in new product development," says William Agostini.

Mia Widell Örnung

http://zopps.ericsson.se

### GOOD ADVICE FROM ÅSA

The need for help and support is increasing constantly. The number of calls to helpdesk units around the globe is growing by 50 percent annually. Although standardization gives rise to fewer disturbances and problems, rest assured that a satisfied customer often comes back for more. It is more efficient to contact a helpdesk than to disturb a colleague who might not be able to help, and who may have something more important to do.

Many calls concern the same questions. To easily eliminate certain potential faults and arrive more quickly at the solution to your problem, Åsa Söderberg presents some helpful hints and good advice:

- Reboot the computer, but don't forget to save everything first.
- Check the cable connections in your computer and wall outlets.
- Try to find the answer to your question in the Help menu. If the problem persists, call the helpdesk. Have your memo identification and user name ready, as well as the name of your printer, server, work station or computer presenting the problem.

The name of your work station is found on the prompter in any of the terminal windows. If the problem is related to ESOE, right-hand click on the network neighborhood on the desk and select properties.

Center creates technical solutions and tools for local helpdesks in all parts of the world.

"We manage and develop integrated helpdesks and offer global IT support for Ericsson," says Ove Sahlin, manager of the Helpdesk Competence Center.

The infrastructure includes a global message processing system to link various helpdesks with each other and a concept for developing new, local helpdesks through applications of user-friendly tools. Ongoing development is based on global and virtual perspectives.

"Naturally, we are a spearhead unit that employs global tools and global processes," Ove Sahlin explains.

Åsa Söderberg of the helpdesk in Västberga also has a global perspective. She would be only too happy to meet with customers in other parts of the world.

"Why not Kuala Lumpur, for example, that would be cool," she says as a new call arrives at her helpdesk:

"LAN center, Åsa speaking..."  
New customers need help.

Eva Andersson



Cisco is one of the successful American IT companies on many lips these days. This article was excerpted from Business Week. It provides good insight on how young, dynamic companies function in comparison with traditional production-based companies.

# Cisco – a good model with

The once unthinkable decline of many of the world's largest corporations has become all too common in recent years. Strategic blunders and oversights by management have pulled down such powerful and mighty giants as AT&T, Eastman Kodak, and General Motors.

Yet there is a less visible but even more critical danger: the inability to adapt to the speed and turbulence of technological change. After massive high-tech investments, management is only beginning to make the organizational changes needed to transform information technology into the potent competitive weapon that it will need to be in the 21st century.

Few companies have grasped the far-reaching importance of the new technology for management better than Cisco Systems Inc. The San Jose, Calif. company has become the global leader in networking for the Internet, with annual revenues of more than USD 8 billion. It's also a Wall Street darling, with a market cap approaching USD 100 billion.

Cisco could well provide one of the best road maps to a new model of management. Partly because it makes the tools to build the powerful networks that link businesses to their customers and suppliers, Cisco itself has been at the forefront of using technology to transform management practices.

## Near-religious

But it's not only the company's innovative use of technology that wins favorable reviews. It's also the company's mind-set and culture, its willingness to team up with outsiders to acquire and retain intellectual assets, its near-religious focus on the customer, and its progressive human resource policies.

This corporate adolescent – founded in 1984 by a group of computer scientists from Stanford University – is headed by a leader, John T. Chambers, who cut his teeth at successful companies that stumbled. At both IBM and Wang Laboratories Inc., the soft-spoken West Virginian got a firsthand glimpse of how arrogance and reluctance to change caused severe pain and dislocation.

Those experiences, including a traumatic time when he survived five layoffs in 15 months at Wang – before resigning in 1990 –

colored his view of what a healthy organization should be. "It taught me how a company should be built in the first place and how to do things dramatically different the next time," says Chambers, 48, who joined Cisco in 1991 and became CEO in 1995. "Laying off people was the toughest thing I ever did. I'll move heaven and earth to avoid doing that again."

To hear Chambers tell it, his people and his organization are "in the sweet spot" – where technology and the future meet to transform not only business but all of life.

## Simple, honest vision

"We can change the way people live and work, play and learn." It is an idealistic phrase that falls out of his mouth repeatedly and unabashedly. It is also an inspiring and motivating declaration for each of Cisco's 13,000-plus employees.

Chambers aims to be the Jack Welch of the new millennium. Like General Electric Co.'s Chairman Welch, he has decided he wants to be No.1 or No.2 in every market, a condition that already exists in 14 of the 15 markets in which Cisco competes. Beyond that strategic goal, Chambers believes that the new rules of competition demand organizations built on change, not stability; organized around networks, not a rigid hierarchy; based on interdependencies of partners, not self-sufficiency; and constructed on technological advantage, not old-fashioned bricks and mortar.

In the new model that Chambers is creating at Cisco, the network is pervasive – central to nearly everything.

It seamlessly links Cisco to its customers, prospects, business partners, suppliers, and employees. This year, Cisco will sell more than USD 5 billion worth of goods – more than half its total – over the Internet, nearly three times the Internet sales booked by pioneer Dell. So successful has Cisco been in selling complex, expensive equipment over the Net that last year Cisco alone accounted for one-third of all electronic commerce.

## Technical support over the network

Seven out of ten customer requests for technical support are filled electronically – at satis-



Few companies have grasped the far-reaching importance of the new technology for management better than Cisco Systems Inc.

faction rates that eclipse those involving human interaction. Using the network for tech support allows Cisco to save more money than its nearest competitor spends on research and development.

"It has saved me 1,000 engineers," gushes Chambers. "I take those 1,000 engineers, and instead of putting them into support, I put them into building new products. That gives you a gigantic competitive advantage."

The network also is the glue for the internal workings of the company. It swiftly connects Cisco with its web of partners, making the constellation of suppliers, contract manufacturers, and assemblers look like one company – Cisco – to the outside world. Via the company's intranet, outside contractors directly monitor

orders from Cisco customers and ship the assembled hardware to buyers later in the day – often without Cisco even touching the box. By outsourcing production of 70 percent of its products, Cisco has quadrupled output without building new plants and has cut the time it takes to get a new product to market by two-thirds, to just six months.

The network also is Cisco's primary tool for recruiting talent, with half of all applications for jobs coming over the Net. When an employee wants information about a company event or health benefits, or needs to track an expense report, the network is the place to go at Cisco. The upshot: More than 1.7 million pages of information are accessible by employees who use the Cisco network thousands of times every day.

# unique leadership

"We are," says Chambers, "the best example of how the Internet is going to change everything."

Technology aids and abets this business model, but it does not completely displace human interaction. "The network works better when you've already had a personal touch," insists Chambers. That's why he does quarterly meetings with employees at a nearby convention center, why all employees in the month of their birth are invited to one of his 90-minute "birthday breakfasts," and why he works harder than most to encourage open and direct communication with all of Cisco's leaders.

Chambers also believes in partnering with other businesses. Plenty of companies forge links with others, but Cisco has a track record of making them work.

A good example is Cisco's partnership with Microsoft Corp., which last year resulted in a new technology to make networks more intelligent. The software lets networks know immediately a user's identity and location and to respond differently to each one. The partnership allows both companies to expand this market together more rapidly.

Another theme – often heard but seldom exercised by corporate leaders – is the central importance of the customer. Nothing causes Chambers more restless nights than worrying over how to serve customers better.

## The customer is the strategy

In this new model, strategic direction is not formed by an insular group of top executives, but by the company's leading customers. The customer is the strategy. "There is nothing more arrogant than telling a customer: 'Here is what you need to know,'" says Chambers. "Most of the time, you are not going to be right."

Rather, Cisco's leading-edge customers are seen as partners in forming the company strategy. Example: After Boeing Co. and Ford Motor Co. informed Chambers that their future network needs were unlikely to be satisfied by Cisco, Chambers went out to make his first acquisition to solve the problem. That deal, to acquire local-area-network switchmaker Crescendo Communications in 1993, put the company into a sector of the industry that now accounts for USD 2.8 billion in annual rev-

enue. Rather than acquire merely to speed growth or swell market share, Cisco routinely employs acquisitions to capture intellectual assets and next-generation products.

In talent-hungry Silicon Valley, Cisco measures the success of every acquisition first by employee retention, then by new product development, and finally return on investment. The company has been phenomenally successful at holding on to the intellectual assets it buys: Overall turnover among acquired employees is just six percent a year, two percentage points lower than Cisco's overall employee churn.

## Tough acquisition guidelines

Every acquisition, moreover, must meet Cisco guidelines. For years, Chambers watched IBM and other high-tech outfits acquire and then slowly smother any number of entrepreneurial companies. What he learned was that you never buy a company whose values and culture are much different from your own.

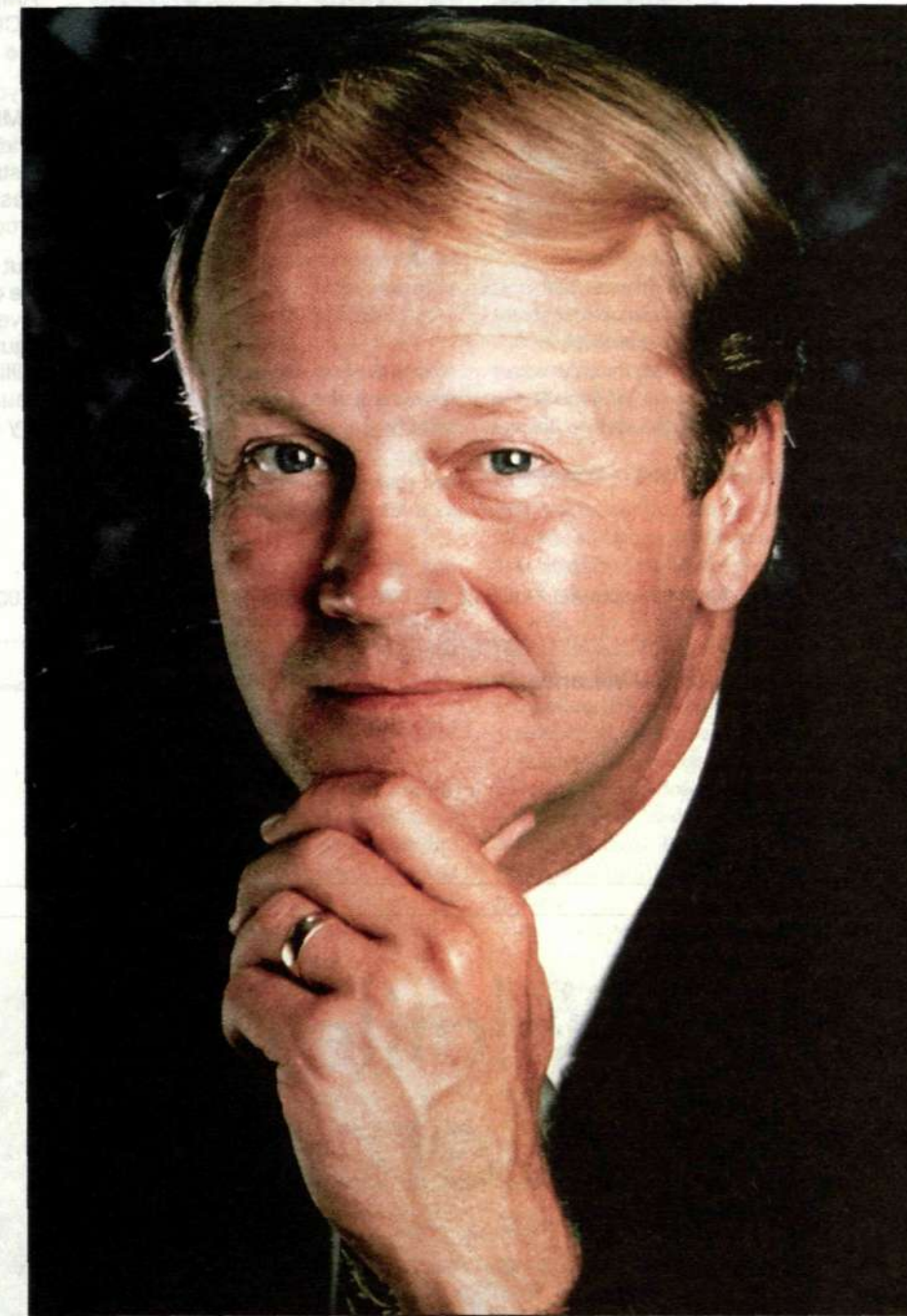
Chambers also believes that each deal must boast both short-term and long-term wins for customers, shareholders, and employees. "If there are no results in three to six months, people begin to question the acquisition," says Charles H. Giancarlo, vice president for global alliances. "If you have good short-term wins, it's a virtuous cycle."

At Cisco, wages are less important than ownership. Some 40 percent of the stock options at the company are held by "individual contributors" who on average boast more than USD 150,000 in option gains. Egalitarianism is critical to successful teamwork and to morale.

"You never ask your team to do something you wouldn't do yourself," says Chambers, who flies coach and has no reserved parking space at headquarters.

There are other leaders, of course, besides Chambers, who hope to create an organization that may very well revolutionize the fundamental business models of major global companies. But he's surely in the "sweet spot," helping to write the new rules for managing.

John A. Byrne  
Business Week No. 35/90



John T. Chambers, 48, joined Cisco in 1991 and became CEO in 1995. Using the network for technical support allows Cisco to save more money than its nearest competitor spends on research and development.

## INDUSTRY NEWS

### Iridium to be marketed in Sweden and Finland

► The Swedish operator Telia will be marketing satellite telecom Iridium's global mobile services in Sweden and Finland. Satellite services will be available in September of this year. Telia will be selling Iridium telephones and SIM cards. The satellite networks will inter-operate with GSM networks.

On August 19, Iridium sent up two more satellites for its communications system, which will have worldwide coverage. The system is scheduled to be put into commercial operation by the end of September.

Iridium is a joint venture between 19 parties, 17 of which are in the telecommunications industry. They include manufacturers such as Motorola and operators such as Sprint and o.tel.o.

http://www.iridium.com

Iridium will make its global satellite system for mobile communications available in September.



### Passagen favorite Swedish Web site

► Telia's Web site – Passagen – topped the list of most visited Swedish Web sites during July. Following close behind were Tele2, Telenordia, Telia and AltaVista Sverige, according to data collected by the polling company Sifo.

The report confirms that IT and media-related Web sites are growing the fastest, while sales oriented Web sites are losing ground.

The study was based on 1,000 interviews each week.

Passagen's Web site had 955,000 different visitors during July. By comparison, Ericsson's external Web site has an average of 500,000 hits per day from around the world. That, however, is the number of pages viewed each day so the actual number of visitors is smaller.

http://www.passagen.se



### What happened to Baywatch?

► Until about a year ago, Bay Networks printed a user magazine entitled Norden Baywatch. Why the magazine disappeared or changed its name is anyone's guess.

Bay Networks is a supplier of network products, especially for the datacom industry. Like the lifeguards on the TV series Baywatch, the company has its headquarters on the American west coast.

### Industry information attracts 600 daily

► Ericsson's intranet site for competitor and industry news updates, the Business Information Center (BIC), attracts over 600 visitors a day. Altogether, they view over 8,000 different Web pages. The average Web site visitor spends 14 minutes per session. These are the results of a study that was recently published on the BIC Web site. The independent research company that conducted the study, also evaluated how well the Web site works. It received good marks for ease of use as well as for its content, which was considered to be well suited to its purpose. The search engine performs well but could be made more advanced, according to the study.

Of those users who replied to questions pertaining to the Web service, 87 percent said that they could benefit directly in their jobs from the information. Last year, 76 percent responded similarly. Decide for yourself by checking out what kinds of competitor and industry information is offered on the BIC intranet site.

http://bic.ericsson.se

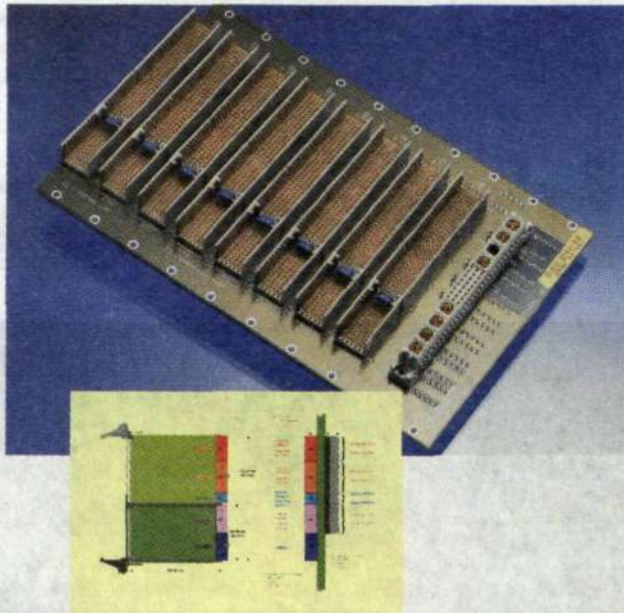
### Not your average mobile phone

► If you purchase a Jaguar, you can get it equipped with a deluxe mobile telephone. The telephone keypad is integrated into the car's instrument panel, and uses the car's sound system speakers for the telephone. In addition, a discrete microphone is included for hands-free operation. The basic package includes a Motorola 8700 dual-band telephone but, for an additional fee, it is possible to choose from other telephone manufacturers, including Ericsson. It is possible to dial preprogrammed telephone numbers by merely pushing a couple of buttons on the hub of the steering wheel.

And when a call made using the hands-free system is finished, the sound system turns itself on again.

The telephone package costs an additional SEK 11,000. But more than likely, that is not a problem for someone purchasing a Jaguar. Source: Mobil magazine





## We Helped Develop The CompactPCI Bus. Now Let That Experience Work For You.

AMP provided the modeling and simulation used in developing CompactPCI as a high-performance, industrial-strength system. We can bring the same level of expertise to your design needs.

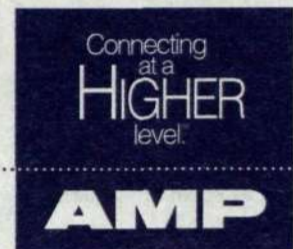
If you need to get to market fast and can't afford to take chances, talk to AMP. Our design services include system architecture, partitioning and bridging, I/O interfacing, signal integrity analysis and modeling, power distribution, backplane and PWB layout, thermal management, enclosure design and EMI control. In fact, when we design and manufacture your product, we guarantee the first article performs to specification.

But let's end where we began. If CompactPCI is your line of business, we can meet your needs for components, loaded backplanes and higher-level assemblies. We also offer evaluation hardware in generic configurations to get you started, and complete global manufacturing capabilities to keep your production on target. We can work with you to define your requirements and then produce your products to meet your delivery and volume needs.

AMP Svenska AB, Box 512, SE-175 26 Järfälla • Phone +46 8 580 833 00 • Fax +46 8 580 194 70

<http://www.amp.com>

AMP and Connecting at a Higher level are trademarks.



# Non-Volatile Memories

STMicroelectronics is committed to long term support and investment for Non-Volatile Memories, including EPROM, EEPROM and ASM, Flash Memories and Non-Volatile RAMs.

## EEPROMs

- Densities up to 1 Mbit
- 1M cycle endurance/40 year data retention
- Application Specific Memories

Interface	256b	1Kb	2Kb	4Kb	8Kb	16Kb	32Kb	64Kb	128Kb	256Kb	512Kb	1Mb
Serial Bus												
I <sup>2</sup> C (M24)												
MICROWIRE (M93)												
SPI (ST95/M95)												
Parallel Bus (M28)												

### Road map

ASM products optimise the architecture and interface for an application. They add features that enhance or protect intellectual property.

## Flash Memories

- **Standard Range:** a range of industry standard Flash memories with better designer support, including 'C' language drivers.
- **User Architecture:** Flash memories with advanced features that improve cost/performance in applications.
- **Mass Storage:** investments that will make 1 Gbit Flash memories using 0.13µ process technology for future applications.

### Standard Range

	256Kb	512Kb	1Mb	2Mb	4Mb	8Mb	16Mb	64Mb
5V, 3V								
x8, x8/x16								
Uniform & Boot Block								
5/12V, 3/12V								

### User Architecture

Typical features include: RWW short latency - for EEPROM emulation - burst/synchronous interfaces and array architectures. Products will include 16 Mbit and 64 Mbit for cellular phones, STB, Network computing. Multiple-memories combine Flash+EEPROM up to 8Mb+256Kb, Flash+SRAM up to 16Mb+1Mb and PSD with Flash+SRAM+EEPROM+3000 gate logic on a single chip.



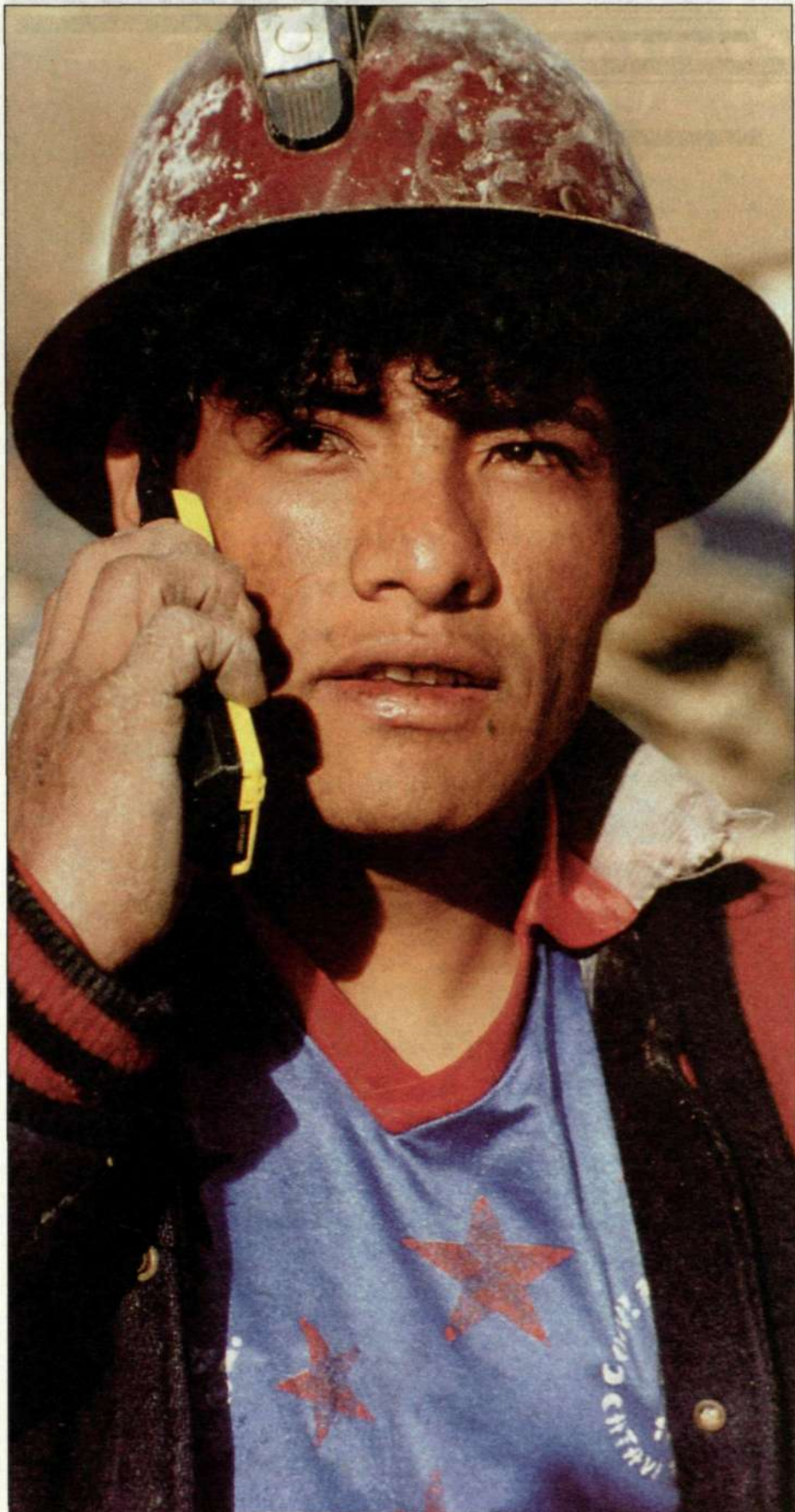
The ST logo is a registered trademark of STMicroelectronics

Fifth from the bottom. Ericsson in Bolivia compiled an unimpressive record in a customer satisfaction survey of AMPS/D-AMPS technologies in 1997. But the results were not totally unexpected for a new company. Nevertheless, a warning signal was heard, a signal that needed to be taken seriously and acted upon. And it was!



Lisa Teljeby and Elisabeth Kvarnsjö were offered the opportunity to conduct a survey of customer satisfaction for Ericsson in Bolivia.

# Eye-opener in Bolivia



Mobile telephones have become commonplace among private individuals in Bolivia, particularly in view of the country's prohibitive costs for fixed telephone services.

Photo: Kristina Robberts

"We were operating as a new company, and our customers were also in a completely new situation. As a result, there were failures and shortcomings in experience and routines on both sides, which played a major part in our poor results," says Magnus Gall, account manager for Entel Móvil at Ericsson in Bolivia.

"But we were not satisfied with that analysis. We were forced to implement corrective measures. The results of the survey were a warning signal heard loud and clear throughout the company."

When a fax arrived from two students of economics who wanted to conduct their graduate studies, Ericsson in Bolivia reacted immediately.

"We recognized an opportunity to engage people from outside the company to study our operations. And to conduct the survey from an academic perspective."

At about the same time, Lisa Teljeby and Elisabet Kvarnsjö, two students of international economics at the University of Linköping, were looking for an opportunity to pursue on-the-job training and graduate studies in a company outside Sweden.

## Reply from La Paz

"We sent faxes to the largest Swedish companies in various countries, including Astra, Atlas Copco, Scania, Electrolux and Ericsson." The two young women had already received positive replies from Scania in Madrid and Johannesburg when they were contacted by Ericsson in La Paz.

"It sounded more exciting, so we decided to accept the offer from Ericsson."

The results of Ericsson's customer satisfaction survey in Bolivia had just been announced. The company's scores in such areas as service, information and deliveries were far from acceptable, but few complaints concerned actual products and equipment. The results indicated the problems were clearly more of an organizational nature than technical.

Entel Móvil, the Bolivian national telephone company, is Ericsson's most dominant customer in Bolivia. Ericsson has been commissioned by Entel to build a mobile telephone network in the country. Telecom Italia of Italy, which owns 50 percent of Entel, has managed the Bolivian company for nearly two years.

"Actually, only five people at Entel took part in Ericsson's survey, and there is good reason to believe they were among the most critical. Nevertheless, we believe the results were a fairly accurate reflection of customer satisfaction," Lisa Teljeby and Elisabet Kvarnsjö agree.

## Importance of strong organization

With only ten days' notice, the two young Swedish women packed and left for Bolivia. After their arrival, they spent six weeks interviewing about 15 people at Entel and nearly half of all Ericsson employees in Bolivia, amounting to about 30 persons.

"We believe it's important that people from outside the company conducted the study," the women explain, "rather than someone with whom Entel has already established some form of business relations."

"We were very well-received, and everybody was open and frank, perhaps because we are young women and perhaps because we both speak good Spanish. The fact that we did not represent the company and were not dependent on Ericsson was probably the most important factor in our favor."

And the results of their study?

"The people at Ericsson are already aware of many of our conclusions, but simply have not

had time to implement corrective measures.

"Generally speaking, Ericsson has all the resources it needs in Bolivia, but hasn't always utilized them prudently. The process of opening and staffing a new office was completed so quickly that some organizational considerations were overlooked."

A proposal submitted by the two women is quite simple – and complicated!

"A strong internal organization must be established to achieve a higher degree of customer satisfaction."

"Coordination and communications between different departments and business areas of responsibility are sorely lacking. And the delegation of responsibility needs greater clarity."

## Customer is part of the problem

Ericsson has already started to act on the conclusions and proposals for corrective measures submitted by Lisa Teljeby and Elisabet Kvarnsjö. A new organizational plan has been adopted, with more clearly defined areas of responsibility between different departments and improved control over communications and coordination. Job descriptions for all employees are also being revised to establish greater clarity.

Ericsson has a strong ambition to educate local employees in Bolivia so they can gradually assume greater responsibility for the company's operations. The process will take time, however, according to the young women from Sweden.

In conclusion, although they underlined the crux of the problem at Ericsson, the customer also bears part of the blame. Entel is a large, formerly government-owned company with strong bureaucratic traditions, tedious decision-making processes and shortcomings related to the dissemination of internal information. Despite its present management by Telecom Italia of Italy, it takes time to change ingrained administrative routines.

## Study results not surprising

At the end of May, the two University of Linköping students presented the results of their study and proposals for corrective action.

"I'm not surprised by the results. We have had strong suspicions that match a great deal of their findings," says Magnus Gall. "But our suspicions have now been confirmed in writing, which will make it easier to act accordingly."

"The type of study we conducted, under the direction of two independent consultants, also shows our customers that we are taking their opinions and viewpoints seriously, and that we are trying to improve in areas where improvement is needed," he continues.

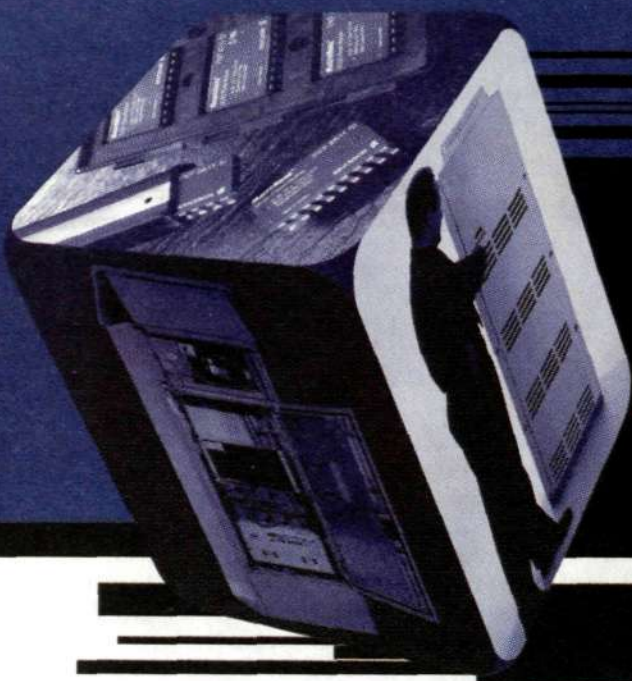
"This was the first customer survey conducted by Ericsson in Bolivia, and we are now planning additional surveys in other product areas," says Magnus Anseklev, sales and marketing manager in Bolivia. He mentions mobile telephones, for example, an area in which users are also end-customers, and AXE switching equipment.

"Our strategy is to work in close cooperation with customers and learn more about their business opportunities," he continues. He also expresses hopes that Ericsson's customer satisfaction survey in 1998 will show much better results.



Magnus Gall

Annika Agebjörn



# Masters of our art



Ericsson Components offers you a world-class range of components, sub-assemblies and services on your doorstep. And all with Ericsson quality, reliability and technical know-how. **Energy Systems**, as part of Ericsson Components, offers total energy solutions. These range from miniaturized power modules that fit directly onto circuit boards, up to complete energy solutions for large exchange installations. **Microelectronics**, as part of Ericsson Components, delivers the enabling technologies for solutions in wired, fiber and wireless applications. This division makes highly competitive, high performance SLICs, RF power transistors, RF ICs and modules, digital and mixed system ICs, and opto-electronic devices. As part of Ericsson Components, **Ericsson Electronic Distribution** holds a very wide range of electronic parts, all of which can be delivered anywhere in Europe within 24 hours. Full technical support and a host of other value-added services, designed to work with customers' own logistics, ensure the lowest cost of ownership and an efficient supply chain. So you see, for dedicated telecom components, your first call should be to Ericsson Components.

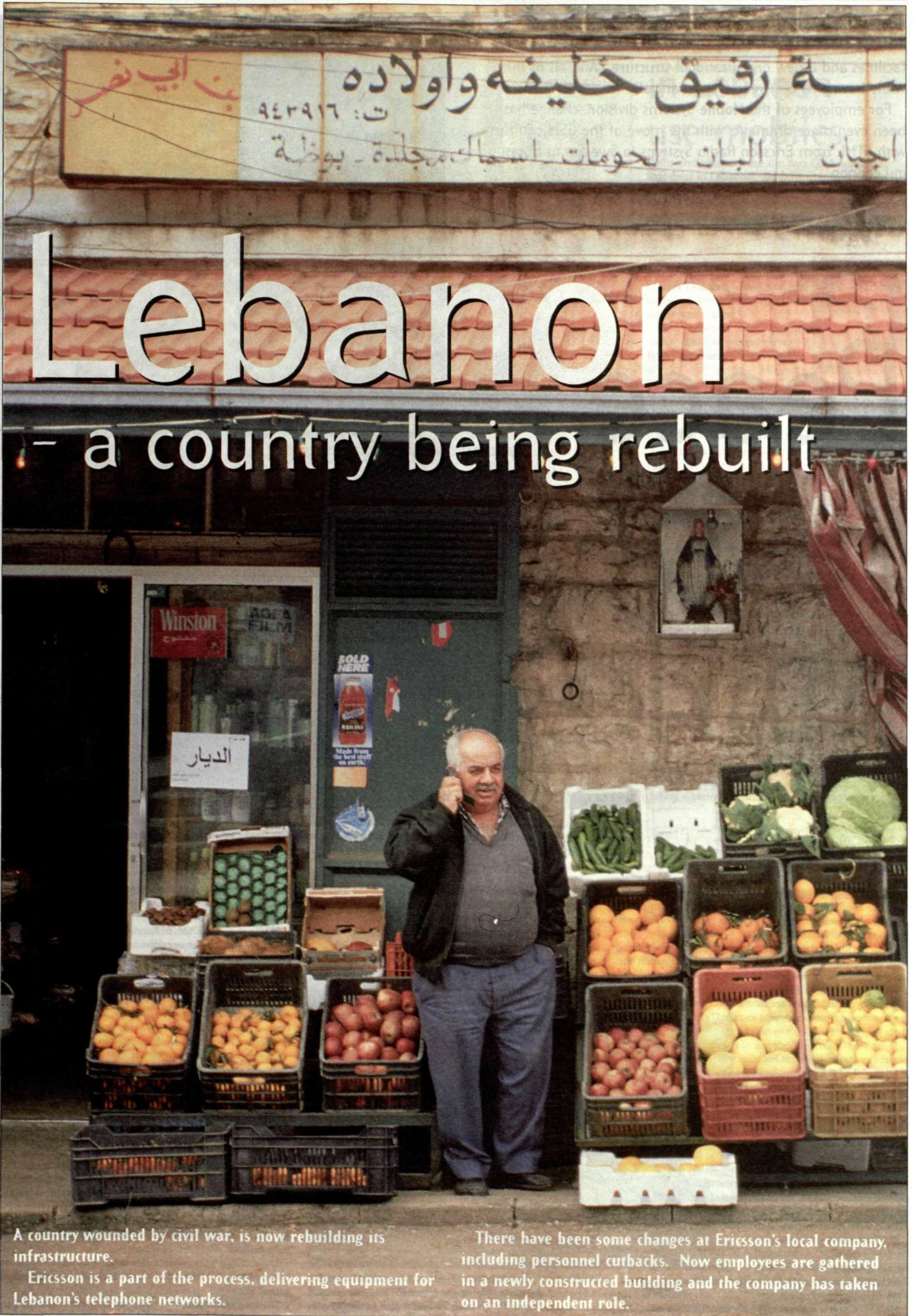


*Ericsson Components*

· ENERGY SYSTEMS · MICROELECTRONICS ·  
· ELECTRONIC DISTRIBUTION ·

Ericsson Components  
Internet: <http://www.ericsson.se/components>  
Intranet: <http://www.eka.ericsson.se>

**ERICSSON** 



A country wounded by civil war, is now rebuilding its infrastructure.

Ericsson is a part of the process, delivering equipment for Lebanon's telephone networks.

There have been some changes at Ericsson's local company, including personnel cutbacks. Now employees are gathered in a newly constructed building and the company has taken on an independent role.

Ericsson in Lebanon went through many changes during 1997 including a new company name, a move to new facilities and a new organizational structure. And all of this while having its best year ever, financially.

For employees of the Mobile Systems division, change has been even more dramatic, with the move of the GSM contract with FTML from Ericsson Radio Systems in Sweden to Ericsson in Lebanon.

# Peace revives market



Many of the 3.5 million people who live in Lebanon have not been able to afford mobile telephones. But at the end of last year, pre-paid telephone cards were introduced, increasing sales of mobile telephones significantly.

Photo: Nils Backman

"The entire company is now gathered in one building. Previously, we were located in three different places here in Beirut," says Jan Embro, president of Ericsson in Lebanon since March of last year.

He gives a tour of the newly constructed building, where Ericsson has three floors and its own parking garage within the building, something unique for Beirut.

At the beginning of 1997, the company had approximately 300 employees, today there are around 150. Of these, only six are employed on overseas contracts, so-called "expats," where once there were 40.

"Sure, it has been a difficult task to reduce the number of employees so drastically, but it has gone well, and as far as I know everyone who left has gotten new jobs. People with Ericsson experience are in demand," says Lars Ahlbom, who oversees finances and administration.

## Good results

A large number of those who left Ericsson used to work at Ericsson's regional offices or at the project office for fixed telephony which no longer exists. During this period of personnel reductions, a Compass survey was conducted and, despite the significant changes, showed good results in comparison with Ericsson overall.

"We have many young employees, the average age is around 30 years old, and that means that we are investing heavily in skills development. Another important task is to implement Ericsson values," says Jan Embro.

He adds that it is important for all employees

to be aware of the company's goals and, as a result, the 2005 and "Wanted position" programs have been broken down not just to the company level but all the way down to the individual level. Follow-up every month consists of comparing the current situation with how things should be.

The company will also become ISO-certified within the year.

## Three different areas

Ericsson in Lebanon is organized into three customer-oriented divisions as well as an administrative and financial unit. The three areas are Infocom Systems, Mobile Systems and Mobile Telephones and Terminals.

Mikael Eklund is responsible for the Mobile Systems division which has approximately 50 employees.

He recounts the spin-off process which has taken place within the division due to the new organizational structure that was implemented within the GSM, NMT and TACS business units in January.

The basis for the new structure is a new way of working, putting the customers in focus, which means an adjustment out at Ericsson's local companies.

"Here at the Mobile Systems division, we were the first Ericsson company outside of Europe to implement this type of spin-off process. An important step was taken on the first of April when the contract with our customer, GSM operator France Telecom de Liban (FTML), was turned over by Ericsson Radio Systems to Ericsson in

Lebanon. With that transaction, we became a "qualified local company," explains Mikael Eklund.

He is a so-called KAM, or Key Account Manager, and has the operative and the consolidated responsibility for profitability of the contract with FTML.

Antoine Nehmé is the Infocom Systems division manager and has approximately 80 employees. He relates that there is one main customer for fixed telephony, the Ministry of Post and Telecommunications (MPT).

During the civil war in Lebanon, the country's infrastructure was significantly damaged and work to rebuild the fixed telephony network is still ongoing.

## Signed a contract for rebuilding

"In 1993, we signed a contract with MPT for 284,000 AXE lines in an expansion and rebuilding of the telephone network. In addition to Ericsson, Siemens and Alcatel were also chosen, and each supplier received a territory within Lebanon in which to work. In 1994, we signed another contract but with turn-key provisions for buildings, towers, transmission as well as central and subscriber networks."

Up to 65 percent of the territory that Ericsson was assigned to was under occupation, which, of course, has made the work more difficult.

It is difficult to run cables in a country as mountainous as Lebanon, which is why radio access was chosen for certain rural areas.

"In April of last year, we reached an agreement with MPT to



Jan Embro

## A half million in Lebanon use mobiles

Cellis and Libancell are the two GSM networks that exist in Lebanon. Both went into commercial operation in 1995. Cellis is jointly owned by France Telecom Mobile International, which has controlling interest, and a private Lebanese company. Ericsson is the supplier for the Cellis system.

Two Lebanese companies and Sonera (formerly Telecom Finland) control Libancell. Motorola and Siemens have delivered GSM equipment to them.

"The networks have approximately 250,000 subscribers each. Both experienced very strong growth when pre-paid telephone cards were introduced," says Mikael Eklund, Mobile Systems division manager for Ericsson in Lebanon.



Mikael Eklund

## A sixth telephone exchange

Today, the Cellis system has 234 base stations, a sixth exchange was recently put into operation and a number of additional base stations are planned. A test system for GSM 1800 has just been installed.

Because of the long call times per customer, averaging approximately 800 minutes per month, the network in Lebanon is comparable to the GSM network that France Telecom has in France.

At the same time, central Beirut has a very high call density, one of the most intensive in the world per unit of area.

## Increasingly important cooperation

"We have very good ties with Ericsson and that cooperation will become increasingly important in the future," says Patrick Souldard, technical manager for the GSM operator FTML. "Together, we have to train users and suggest different solutions. One example could be to get major business customers to understand the possibilities that mobile data communication offers."

When Patrick Souldard comments on cooperation with Ericsson, he emphasizes the high quality of Ericsson products. A customer survey has also shown that FTML is very pleased with its supplier. On a scale of one to five, Ericsson in Lebanon received a 4.6, even though that was during a period when large-scale reorganization of the company was taking place.

Gunilla Tamm

use Ericsson's DRA 1900 technique for 40,000 lines," says Antoine Nehmé.

Antoine Nehmé is responsible not only for Infocom Systems, but also for the Mobile Telephones and Terminals division where, so far, Paul Hadaya is the only employee.

## 35 percent of the market

"Ericsson has three distributors here in Lebanon and approximately 35 percent of the market. Nokia has an equally large share," he explains. Other competitors, in addition to Motorola, include Siemens and Philips.

At the end of last year, pre-paid telephone cards were introduced, dramatically increasing sales of mobile telephones. This gave many people, who previously could not afford to buy mobile telephones, the opportunity to do so. Demand for cheaper telephone models has increased.

Presidential elections will take place this autumn in Lebanon, something which both Mikael Eklund and Antoine Nehmé mention when they talk about the near future and business opportunities.

All investments in telecommunications, both fixed and mobile telephony, are being affected since they have been postponed for the time being.

"It is true that such a correlation exists," explains Jan Embro. At the same time, he adds that Ericsson in Lebanon is now functioning very smoothly with competent employees. "We will gladly share both our experience and our skills. We could become a skills center for many of Ericsson's companies here in the region," he says.

Gunilla Tamm  
gunilla.tamm@era.ericsson.se



Ericsson in Lebanon has about 150 employees. Christine Fares, left, and Maya Azouri are two of them. Christine works in the Infocom Systems division and Maya in the Mobile Systems division.

Photo: Gunilla Tamm

## LEBANON

Lebanon is a small country, about one third the size of Belgium. The country borders on Syria and Israel.

A total of 3.5 million people live in the country, and about half of those live in the capital city of Beirut.

A large portion of the population, about 13 million, live abroad.

The civil war, which ran from 1975 to 1990, caused significant damage to the country and there are still many bombed out houses, primarily in Beirut. Unrest is still present in the southern portion of the country.

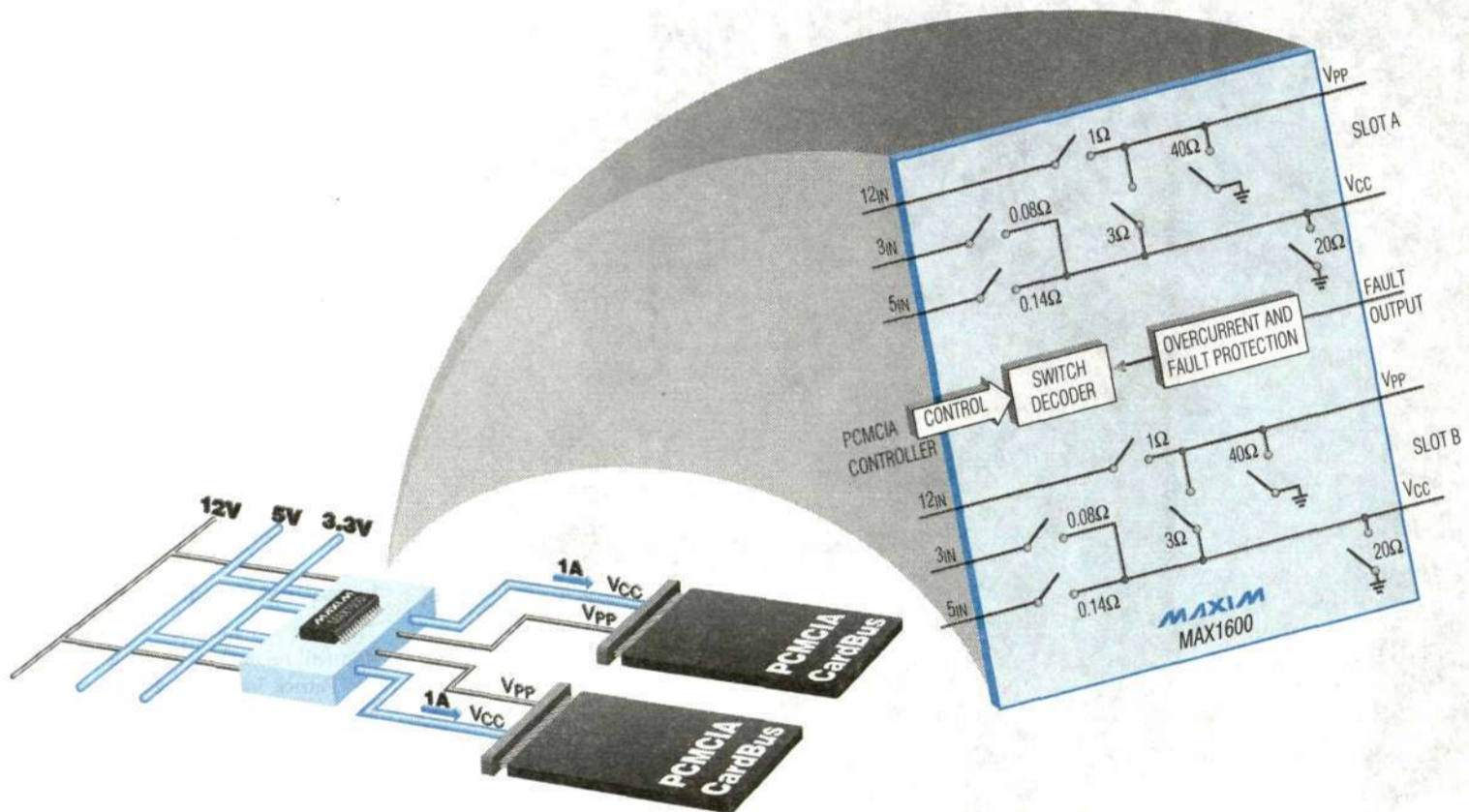
Ericsson has operated in Lebanon since 1950, when a technical office was opened. Prior to that time, operations were run using an agent.

In 1970, the company Société Libanaise des Téléphones Ericsson SARL was formed. Last year the company changed its name to Ericsson Lebanon SARL. The company currently employs 150 people.

# PCMCIA/CardBus POWER SWITCHES: 1A FOR TWO SLOTS

**One Tiny SSOP Saves More Space in Your Notebook  
and Desktop Power Designs**

The MAX1600 family is all you need to manage 3.3V, 5V, and 12V in your dual PCMCIA or CardBus design. All switches feature overcurrent and thermal protection, as well as break-before-make switching, and allow "hot swapping" of cards without inrush current problems. The MAX1600 family is code compatible with all PCMCIA digital controllers, including those from Cirrus Logic, Databook, Intel, and Vadem. The MAX1601/MAX1604 use SMBus™ serial interface.



The MAX1600 family is another of Maxim's comprehensive power-management solutions for notebook computers.

- ◆ Complete Support for 2 PCMCIA/ CardBus Sockets
- ◆ Soft-Start Allows Hot-Swapping
- ◆ Dual Switches:
  - 3.3V: 1A @ 0.08Ω (MAX1600/MAX1601)
  - 1A @ 0.24Ω (MAX1603/MAX1604)
  - 5V: 1A @ 0.14Ω
  - Vpp: 12V @ 120mA
- ◆ Low Standby Current: 10μA
- ◆ Small Area:
  - No External Components
  - Narrow 5mm SSOP
- ◆ Overcurrent & Thermal Protection
- ◆ Industry-Standard Interfaces:
  - Parallel: MAX1600/MAX1603
  - SMBus: MAX1601/MAX1604



**FREE Notebook Design Guide—Sent Within 24 Hours!**  
Includes: Data Sheets and Cards for Free Samples

Call For a Design Guide or Free Sample  
U.K. (44) 118 9303388, Sweden (46) 84445430  
Toll-Free in the U.S. 1-800-998-8800

**MAXIM**

<http://www.maxim-ic.com>

1998 EDITION!  
FREE FULL LINE DATA CATALOG  
ON CD-ROM



Distributed by Allied, Arrow, Bell, CAM RPC, Digi-Key, Elmo, Nu Horizons, and Zeus. Distributed in Canada by Arrow and Bell/Milgray.  
Maxim Sweden, (46) 84445430, FAX (46) 84445439; Austria, Maxim GmbH (Deutschland); Belgium, Master Chips; Czech Republic, Spezial-Electronic KG; Denmark, Arrow Denmark A/S; Finland, Berendsen Components Oy; France, Maxim France, Distributors: Maxim Distribution, IEC Distribution SA (ASAP-Euromega); Germany, Maxim GmbH, Distributors: Maxim Distribution, Spezial Electronic GmbH; Ireland, FMG Electronics; Italy, Maxim Italy, Distributor: Esco Italiana S.p.A.; Netherlands, Koning En Hartman; Norway, Berendsen Electronics; Poland, Uniprod, Ltd.; Portugal, ADM Electronics, S.A.; Russia, Spezial-Electronic KG; Spain, Maxim Distribución, ADM Electronics S.A.; Sweden, Maxim Sweden, Egevo AB; Switzerland, Laser & Electronics AG; Turkey, Inter Elektronik A.S.; U.K., Maxim Integrated Products (U.K.), Ltd., Distributors: Maxim Distribution (U.K.), Ltd., 2001 Electronic Components, Eurodis HB Electronics; Ukraine, Spezial-Electronic KG.

The special series about partnership and cooperation continues in this issue of Contact. Ericsson needs strong relations with world-leading suppliers in several sectors in order to secure its continued growth and development. This edition of Contact includes articles about cooperation in marketing, defense products, software development and semi-conductor semi-conductor circuits. Some of the programs of cooperation are completely new, while Ericsson's alliance with Texas Instruments has lasted more than 10 years.

# Trust the basis of a good partnership



Mutual trust is needed to secure the functionality and growth of a business partnership.

Photo: Pressens Bild

For a business partnership to function and flourish, mutual confidence in both parties is essential, a sense of trust in each other that supports the exchange of ideas. Confidence is also the foundation of Ericsson's business partnership with Texas Instruments (TI), an alliance established and nurtured to promote further improvement since its inception on May 23, 1987, when the two companies signed their original cooperation agreement.

A Principal Cooperation Agreement (PCA) signed by the two companies in May 1987 was intended to extend over a 10-year period, and the two companies are now negotiating terms of a new agreement that will offer a better reflection of modern-day technological development. Ericsson's need for additional business partnerships has also increased following the company's rapid expansion during recent years.

#### Old strategy question

Lars Ramqvist, former President and CEO of Ericsson, was a major force behind the business partnership with TI, dating back to the days when he was responsible for strategic issues in the company. The question of what Ericsson should produce itself and what should be purchased outside the company was already a major strategic issue more than 10 years ago.

"Discussions between Ericsson and TI were started in the mid-1980s, and it took a year to reach final agreement on our partnership. In those days, the agreement was rather unique," says Björn Clevestig, President of Texas Instruments in Sweden, who played an active role in the negotiation process.

The partnership was based on Ericsson's

need to strengthen its technological position and TI's need to consolidate its standing as a major supplier. Ericsson was interested mainly in TI's know-how and experience in semi-conductors, so-called ASIC.

#### Opportunity to penetrate new market

"For us, the partnership was an opportunity to penetrate the telecom industry and shift our focus away from the computer industry, which had always been the dominant market for TI," Björn Clevestig explains.

During the first few years of the alliance, TI's most important partners were Ericsson Telecom and Ericsson Components, which was still called Rifa in those days.

Claes Flodmark, head of strategic procurements at Ericsson Radio Systems, has been involved in the business partnership with TI since the original signing, when he worked for Ericsson Telecom.

"The agreement marked the beginning of a new era, with new roles and new responsibilities, a completely different way of working with a supplier," he explains. "The cooperation has developed through the years, and it is completely natural today for Texas Instruments to assume an active role in our development projects."

The focus of Ericsson's agreement with TI has also shifted over the years, going away from the sole involvement by Ericsson Telecom and Ericsson Components, to include all parts of



Björn Clevestig

Ericsson today, with primary concentration on mobile telephony and particular emphasis on systems and terminals. Digital signal processors, an essential component in GSM systems and mobile telephones, are TI's most important contribution to the agreement.

For TI, the partnership has led to changes in the American company's organizational structure and mode of operations.

"We have created a mirror image of Ericsson's structure, with our account managers working in very close cooperation and conducting a continuous dialogue with Ericsson's program managers," Björn Clevestig continues.

In addition to the benefits of purely technological know-how, the partnership has helped Ericsson reduce costs for the flow of components.

"The agreement covers order routines and supports the maintenance of optimized inventories, among other advantages, which have to be adjusted to the requirements of both Ericsson and Texas Instruments," Claes Flodmark continues.

#### Know-how – a sensitive issue

Problems can be encountered in transfers of expertise from one supplier to another, occasionally necessitating the acquisition of required know-how. Intangible assets, including intellectual property (IP), are important and sensitive issues that have to be addressed tactfully in a partnership.

"It's important that we protect Ericsson solutions that are unique unto the company, and that we formulate the roles of our partners in a manner that is optimal for Ericsson," Claes Flodmark continues.

#### TEXAS INSTRUMENTS

**Founded:** In 1930 by John Clarence "Doc" Karcher and Eugene McDermott in Texas. Seismological equipment used in oil exploration operations were the company's first products.

**Sales:** USD 9,750 [million] (1997).

**Number of employees:** 44,000, half of whom work in the U.S., with the others employed in more than 25 other countries.

**Head office:** Dallas, Texas.

**Why of interest to Ericsson:** Texas Instruments develops and manufactures semi-conductors and ranks as a market leader in digital signal processors. One of the best positioned companies in its industry.

"The foundation for a good partnership is mutual confidence, and I believe we have established that trust with Ericsson, although we have a slight disadvantage in our role as a supplier," Björn Clevestig says. He believes in continued and mutually rewarding cooperation between the two companies, in parallel with the hope of more candid communications with Ericsson's marketing people.

"We work together today in developing various solutions, which means their end-customers are our end-customers. If the marketing people inform us at earlier stages of development what their customers want, it would make it easier for Texas Instruments to help Ericsson maintain and protect its leading market position," he concludes.

Gunilla Tamm

gunilla.tamm@era.ericsson.se



# Agency that knows consumers

"The Bond Campaign," GF788, GH688, AF768. "Make yourself heard"... Young & Rubicam, one of the world's leading advertising agencies, is behind a long series of successful Ericsson advertising campaigns. Cooperation between Ericsson and Y&R is based on longevity and confidence, basic requirements for building a strong brand name.

Young & Rubicam has many years of experience in the consumer market. With brand names like Colgate, Ford and Citibank, the company draws on a strong knowledge bank when helping companies build up their brands. But there are few clients in Y&R's 75-year history that measure up to Ericsson's dynamic business growth.

"Our job is to make the knowledge we have accumulated over a long period of time available to our customers over a short period of time. Development is dynamic and changes occur at an extremely rapid pace," says Jan Hedquist, manager of Ericsson's account at Y&R.

## Fixed partnership

Ericsson's cooperation with Y&R was started two years ago and has already matured into a fixed partnership at a business-area level called strategic alliance. The two partners, accord-



ingly, have established what is commonly referred to as a virtual company.

"We manage the entity as we would any other company; it has a Board of Directors, a strategic business plan and clearly defined objectives. The only difference is that a virtual company has no real assets," explains Martin Blomkvist, manager of business control and marketing within the Mobile

Telephones and Terminals business area.

Based on past experience working in cooperation with several different advertising agencies in all parts of the world, Ericsson realized it needed an agency with a global network. After a series of evaluations, the choice was Young & Rubicam.

"In addition to making it much easier to coordinate our campaigns, the partnership with a worldwide agency like Y&R also provides a variety of synergy effects," Martin Blomkvist continues.

## YOUNG & RUBICAM (Y&R)

**Founded:** In the 1920's by Raymond Rubicam and James O. Young. Y&R's motto is "Knowing more about brands and branding than any other company in the world."

**Annual sales:** USD 12 bn.

**Number of employees:** 12,000

**Head Office:** New York, NY

**Campaigns on behalf of Ericsson:** James Bond, GF788, GH688, AF768 and "Make yourself heard."

**Why of interest to Ericsson:** Access to an agency with a global network.

According to Jan Hedquist, cooperation with an advertising agency should offer strategic know-how and expertise in consumer purchasing patterns. To provide the company with objective insights into how people react to trademarks and products.

"We assume both a strategic and tactical role. It's our job to nurture and develop a brand name that will stand the test of time. In parallel, however, we have to make sure the products will sell now on today's market," Jan Hedquist explains.

Humility is also an important element, however. It's essential that Ericsson's soul is not lost when communicating with consumers.

## Importance of dialogue

"There be an ongoing dialogue in the partnership process. We are dealing with our brand name here," says Mats Georgson, manager of agency relations for Mobile Telephones and Terminals.

Jan Hedquist cites the "Make yourself heard" campaign as a good example of how Ericsson's soul and business approach can be successfully framed in a single message.

"Communication between people represent the commodity Ericsson has sold for more than 100 years. 'Make yourself heard' also reflects Ericsson's democratic outlook and the company's respect for individuals."

## Planning the future together

What sort of demands does Ericsson place on Y&R in the agency's capacity as a cooperation partner?

"We want an opportunity to work together to formulate strategic objectives and visions. The partners should also plan joint operations in the foreseeable future. We also want to see a willingness to share business risks with us," Martin Blomkvist replies.

Mats Georgson also emphasizes the importance of establishing a long-term partnership.

"Brand name development in the marketplace is a long-term process. It's important that we make the right moves today, but at the same time, we must also learn how to do things even better tomorrow."

Gisela Zeime

Ericsson's cooperation agreement with Y&R was started two years ago, and the alliance has now become a fixed partnership. Photo: Lars Åström, Tiofoto



In order for a company like Ericsson to concentrate on its customers and their needs, it's important to work with reliable cooperation partners in other areas of specialized expertise.

Photo: Pål-Nils Nilsson/Tiofoto

## Reliable

Ericsson works in close cooperation with Rational, a leading American software company, to meet its software development needs.

Ericsson recognizes that Rational has the best development tools and support environments available, which enables Ericsson to concentrate on developing new applications for customers.

Accordingly, there is no longer a need for Ericsson to create its own development tools.

Back in the early days, Ericsson maintained and operated a carpentry shop to build large switchboards. Today, the old shop is only a historical anecdote. And it was not long ago that Ericsson produced its own software development tools. Soon, even the days of in-house software development will stand as a piquant chapter in the company's history.

## Partnership agreement

In December 1997, Ericsson entered a partnership agreement with Rational, a leading American software company, concerning cooperation in development and production of standard tools and environments for new software development.

"Ericsson recognized the need for radical

## partner helps sharpen focus

improvements in its software development operations. We started to look around for an independent partner with a competitive standing in the world market," says Jaak Urmi, manager of Ericsson's relations with Rational.

"We wanted to benefit from a leading company's expertise in software so we could concentrate more strongly on our core areas of expertise," he explains.

## Employs 10,000 engineers

Ericsson employs approximately 10,000 software development engineers who will now be able to draw upon the skills and expertise of Rational. First in line was the American standards business unit at Mobile Systems. Today, about 30 persons from Rational are working full-time for Ericsson to facilitate operations of the development company in Montreal.

"We cannot, and should not, program an ATM exchange, for example. Our job is to make sure Ericsson has access to the best tools and support to handle the job. Therein lies the crux of our agreement. We are not simply selling off-the-shelf Rational products to Ericsson.



Jaak Urmi

Our agreement is based on a program of close cooperation in which we adapt our products to meet Ericsson's needs, also contributing such other services as training and support," explains Peter Ehn, a representative of Rational in Stockholm.

He works for a special Ericsson business unit established by Rational to manage the partnership agreement.

## Getting a grip on abstracts

Software development tools are more abstract than conventional products and equipment. They are not as easy to grasp as a carpenter's tools, for example. In addition, the end-product – an application or program – is also an abstract entity that may be difficult to understand completely.

Peter Ehn draws a similarity to a calculation program.

"When you prepare Ericsson's annual report, you don't start by inventing a calculation program. You might use the Excel program, for example, and adapt it to your specific needs. That's about the way we work with Ericsson. We make sure Ericsson's software design engineers have the basic tools they need to produce their software programs."

The services of a business partner that sup-

plies support environments enables Ericsson to concentrate on its core operations. So, you might ask, why didn't Ericsson find a partner in this area years ago?

## New opportunity for Ericsson

"The opportunity quite simply was not available," says Jaak Urmi. "There was no world market for software tools when Ericsson started to develop its own software. In-house development was the only alternative at the time. Today, now that companies like Rational work with a business concept based on providing these types of services, it's no longer necessary for Ericsson to conduct duplicate efforts."

The services of a major independent supplier also offer a significant degree of quality assurance.

As more companies use the same software tools, it becomes easier to discover possible bugs and faults.

A large number of users also represents greater quality assurance.

Patrik Lindén  
patrik.linden@lme.ericsson.se

http://www.rational.com

http://garbowwww.ericsson.se/jdi

## RATIONAL SOFTWARE CORPORATION

**Founded:** 1970.  
**Annual sales:** More than USD 300 M.  
**Number of employees:** 1,800, including 140 in Sweden, where Ericsson is one of the company's largest customers.  
**Head office:** Cupertino, California  
**Geographic markets:** Ericsson's accounts for 5-7 percent of Rational's global sales and one-third of the American company's revenues in Scandinavia, an exceptionally high percentage for one customer.  
Rational has a highly comprehensive

product portfolio, and no single company competes on such a broad front. Competition in individual sectors is highly intense, however.

Rational serves many large customers in various industries, including the finance sector and technology companies in the aviation and military defense industries.

Rational also serves a number of Ericsson's competitors and customers, including Siemens, Nokia and AT&T.



# HIGH-FLYING MOBILE COMMUNICATIONS PRODUCTS

# FUJITSU



Fujitsu, already an acknowledged leader in RF, now offers a complete package of high complexity, high integration products for mobile communications – backed-up by full systems know-how in Europe.

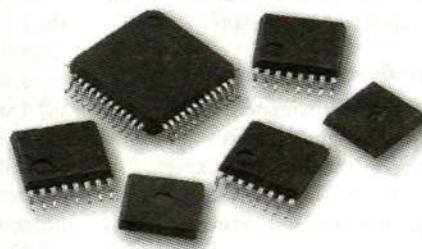


PLLs, VCOs, SAW Filters, ASTRO\* and advanced packaging. Complete local RF IC design supported by the Fujitsu European Wireless Design Centre.

Fast time-to-market for even the most high-flying mobile communications applications.

\*ASTRO (Advanced Semicustom Technology for RF system integration On silicon) RF design methodology

**Fujitsu Communications products with full local support.**



Fujitsu Microelectronics Ltd  
Information Fax Hotline +44 (0)1959 562800  
<http://www.fujitsu-edc.com/products/>

The European market for defense materials is characterized by steady decline. Prices are under pressure from large American defense consortiums. To secure their survival, European defense companies are entering business partnerships.

Ericsson Microwave is no exception. An agreement was signed recently with Thomson of France concerning joint sales and development of EriEye airborne surveillance radar.

A partnership is also expected to be finalized this year for development of the next generation of nose cone radar for the Gripen jet fighter.



Partnerships are needed in the defense sector as a means of enabling companies to absorb substantial development costs. The increasing degree of cooperation is not totally without certain complications.

Photo: Martin Naucler/TiFoto

# Shrinking market underlines importance of cooperation

The post-Cold War era has changed fundamental military security policies in most parts of Europe. Former antagonistic differences between East and West have been replaced by détente and new political alliances.

The relaxation of tensions has created new conditions for the military defense industry. No longer faced with the threat of war, many countries have reduced their defense budget allocations, and the market for defense materials is marked by a state of steady decline.

In the U.S., defense industry stagnation has been countered by formations of large consortiums to consolidate the industry's development resources. Prices have come under pressure, and competition in the shrinking market has intensified.

## Important strategy

Partnerships are becoming an important part of business strategies to support the completion of costly development projects.

"As the European market continues to decline, there is no longer room for all the players that once took part in this arena," says Svante Bergh, manager of the Defense Electronics unit of Ericsson Microwave. "As a result, strategic alliances and mergers are becoming more commonplace. Ericsson Microwave is conducting several development and sales cooperation programs with foreign partners."

Ericsson Microwave recently signed a coopera-

tion agreement with Thomson of France, a major force in defense materials, covering sales and development of EriEye surveillance radar, an Ericsson system that has been sold to Brazil and the Sivam Project for surveillance of airspace over the Amazon region.

In the initial phase of cooperation, the two companies will market the present version of EriEye, supplemented by products from Thomson. Over a long-term perspective, they will work together to develop the next generation of airborne radar surveillance systems.

"The partnership with Thomson offers several advantages," Svante Bergh continues. "With a French partner, EriEye's potential in NATO markets will be enhanced significantly. In addition, we no longer will have to assume the entire financial burden that comes with development and sales of such a sophisticated surveillance system."

## Entering new alliances

The next important partnership for Ericsson Microwave will be concentrated on development of second-generation radar for the Gripen jet fighter.

Three potential partners have already been identified – a cooperation project between three defense electronics companies and two of the



Svante Bergh

American consortiums mentioned above. Efforts to finalize a cooperation agreement will be initiated before year-end 1998.

"The major forces in our efforts to establish a partnership agreement covering Gripen radar are political considerations," Svante Berg explains.

"The next generation of radar for the jet fighter is scheduled for completion by the year 2010, but Sweden does not believe it can afford to finance the costly development program on its own. As a result, political powers have decided we should find a partner willing to share the costs."

## Not totally without complications

"Partnerships in the defense sector are a basic requirement that will enable companies to absorb the substantial costs of technological development. The increasing degree of cooperation is not without certain complications, however. Business partnerships also present problems," Svante Berg says.

"Joint ownership often involves difficulties in conducting efficient business operations, and development projects conducted jointly by business partners are often less dynamic. In addition, a partnership usually means that we have to relinquish our expertise in areas of technology assigned to our business partners."

Niclas Henningsson

niclas.henningsson@emw.ericsson.se

## THOMSON CSF

**Founded:** In 1893 by Elihu Thomson, a Frenchman who gave the company its present name after a few early years under American ownership.

**Annual sales:** FRF 38.5 bn (1997).

**Number of employees:** 46,500 (1997), of whom 31,360 work in France.

**Head office:** Paris.

**Geographic markets:** Thomson CSF is represented in more than 50 countries in all parts of the world.

**Business operations:** Thomson CSF develops sophisticated electronic equipment for defense, information and communication applications. The Group's five business areas are space technology, aviation electronics, communications and commando, missile systems and information technology.

**Interest to Ericsson:** Thomson CSF recently signed an agreement with Ericsson Microwave Systems concerning joint sales and future development of EriEye radar surveillance systems.

FROM THE PAST

# It just keeps on ticking

"There is nothing quite as clever as the Centralograph. Its simplicity is unsurpassed. It is easy to read, does not need to be logged on and is incredibly stable in operation," says Key Johansson, telecom and electrical manager at Sandvik AB.

This legendary Ericsson product, which has been around since the 1930s, is a mechanically operated piece of equipment used to monitor industrial processes. In its heyday, it

was being shipped all over the world.

Even today, there is a Centralograph setup in full operation at Sandvik's heavy section rolling mills. It was delivered in 1965 by LM Ericsson Telematerial AB and has been in operation ever since. Although the 33 year old installation is somewhat worn, it is still possible to get service.

"The most difficult aspect is getting color ribbons," says Key Johansson, who worked at Ericsson before joining Sandvik in 1976. We are looking for replacement equipment, but we still have not found anything computerized which is better.

### 12 different companies

Sandvik AB is located within Sweden's second largest cohesive industrial area, covering an area of almost ten square kilometers. Altogether there are 12 different companies and 6,500 employees. As a result, all kinds of communication equipment is required. Sandvik, with more than 600 different kinds of steel, is full of equipment from Ericsson. Included are five ASA intercom systems with around 500 Ericom speaker phones.

"They are strategically positioned in challenging production areas, were we need to reach between eight and twelve people simultaneously," explains Key Johansson, pointing out the fact that the

feature is not available on current exchanges.

Otherwise, Key Johansson uses the most modern equipment he can find on the market, including an MD110 business exchange with 3,500 lines and a mobile telephone system for both internal and external communications. Most of the system, 85 percent, is based on GSM and the remainder on NMT.



Key Johansson

### A flexible mobile system

As early as 1989, Key Johansson modified a few ASA exchanges, giving them radio transmission functions and integrated them with the current CT 2 system, a precursor to today's modern cordless DECT system. Many experiments with various solutions have resulted in the current flexible mobile system.

The practice of mixing old and new, according to Key Johansson, is a question of using the best equipment that is available. That is why intercom telephones and the Fire Alarm 80 by Ericsson remain and why there are over 300 time recorders from Ericsson used for reliable time accounting.

"The truth is, the new computerized time systems are not very smart," says Key Johansson. "Ericsson's old manuals pertaining to how clock faces should look is the basis for all new acquisitions," he points out.

Thord Andersson

thord.andersson@ebc.ericsson.se

## Ericsson sponsors athletics

During the summer, golden rain has been falling on some of the world's foremost athletic stars in connection with the International Athletic Association's new "Golden League" championship, with competitions in six European cities.

As official sponsor, Ericsson assisted the association by providing financing and the infrastructure for the competitions.

The prizes, with a total value of USD seven million, include the "Ericsson Golden League Jackpot."

The Jackpot will be shared between the winners of the six competitions and the victors in finals held in Moscow on September 5.

The winning athletes will also receive a personal solid-gold Ericsson mobile telephone.

"It is very exciting to be able to support a sport which is developing so well, and we believe that there is a natural synergy between Ericsson and the competitors," says Ericsson's chief marketing executive, Jan Ahrenbring.

"In both cases, the key to success is a combination of simplicity, innovative ability and performance," he says.



Ericsson's Kjell Johansson meets the world record holder in the triple jump during the Golden League athletic competitions.



This is how the Ericsson Centralograph was advertised in Ericsson's 1943 customer magazine, Impulsen.

## THE MAGICAL SINGLE-PIECE CONNECTOR.



## NO. 1 FOR NET DESIGNERS!

Click from Teracom Components is a new connector with absolutely magical features.

Click comes ready assembled and automatically makes a perfect connection every time. All you have to do is push in the cable and tighten the connector. Abracadabra!

The "Click" takes care of the rest.



10 year GUARANTEE

If you don't believe in magic, we have a 10-year guarantee on all our connectors. They are IP68-classified and water-pressure proof. Click is available in DIN 7/16 for EIA 7/8" cable. It is made from silver-plated brass and its technical performance is as magical as the connector itself!

FOR USERS, BY USERS

**TERACOM**  
COMPONENTS

Teracom Components AB, S-242 91 Hörby, Sweden.  
Phone: +46 415 164 00. Fax: +46 415 166 01.

E-mail: components@teracom.se <http://www.teracom.se/components>

# More opportunities for women needed

Her career with Ericsson has taken Fátima Raimondi from Sao Paulo in Brazil, via Kista, just outside Stockholm, to the Portuguese capital of Lisbon – and from fixed telephony to mobile telephone systems.

Fátima Raimondi has been interested in Sweden since her childhood days in Brazil, and it was no coincidence that she went to work for a Swedish company.

Fátima Raimondi studied engineering in Sao Paulo and needed some practical experience before earning her degree.

"It was only natural for me to apply for work at a Swedish company in Brazil, since I was always fascinated by Sweden and everything Swedish," she says. She joined Ericsson to complete her practical on-the-job training in 1982, eventually received her university degree in engineering and joined Ericsson as a full-time employee. Ms. Raimondi started her career working with fixed telephony in cooperation with Embratel, a Brazilian long-distance operator. In addition to her engineering degree, Fátima Raimondi has also studied business management.

## Her first trip to Sweden

In 1985, the young Brazilian engineer made her first business trip to Sweden, where she managed a project assignment for a contract in Venezuela. Four years later, she left fixed telephony and entered the new world of mobile telephony.

"In 1990, I studied mobile telephony for six months and, the following year, I moved to Kista, in Sweden, where I worked for one year," Fátima Raimondi says. "It was very enjoyable and an extremely interesting experience for me to get to know the Swedish people and learn more about Sweden."

In 1991, preparations were being made for the offering of GSM equipment to Telecel of Portugal and, since Fátima's native language is Portuguese, she was involved in the translation work. Eventually, she was also offered a job in Portugal.

Before that, however, Fátima Raimondi re-



**Fátima Raimondi is from Brazil and has worked at Ericsson since 1982 in Brazil, Portugal and Kista. She finds the stereotype that Swedes are stoic and boring to be untrue.**

Photo: Gunilla Tamm

turned home to Brazil for two years. Several large bids were being prepared as the Brazilian market approached pending auctions of its new, B-band mobile telephony licenses.

"The offers were very complex, but the process was delayed and not much was happening at home when I received the offer to work for Ericsson in Portugal. It seemed like an interesting challenge, and I accepted," she explains.

## Account Manager in Portugal

Fátima Raimondi has been working for Ericsson Telecommunicacoes Lda in Lisbon since 1994. Her business card says "Account Manager," and she supervises a group of 12 persons working with Telecel, a Portuguese GSM operator.

"I have a very enjoyable job, and I'm constantly learning new aspects of operations from my colleagues. Naturally, I also share my knowledge and experience with them," Fátima continues.

Her present home is Cascais, a small former fishing village just outside Lisbon. The village

has a lovely fish market, where she often shops before preparing dinner at home. Cooking is one of Fátima's favorite recreational pastimes. When she lived in Kista, Fátima often ate salmon at the Kistahof restaurant, except on Thursdays, when she always had pea soup, one of her favorite Swedish dishes.

## 16 years with Ericsson

During her 16 years with Ericsson, Fátima Raimondi has learned a great deal and matured through various job assignments.

When Fátima Raimondi first became interested in Sweden as a teenage girl, equality between men and women was one of the country's major attractions for her.

"I believe there are many highly skilled women within the company who have still not been fully recognized by Ericsson," she says, hoping to see better development opportunities for women in Ericsson.

Gunilla Tamm

gunilla.tamm@era.ericsson.se

# Testing new telephone suddenly a serious matter

Contact received a letter from Japan describing how testing for a new telephone model suddenly became a matter of life and death.

Sören Andersson explains how he had to ignore the formalities to rescue a drowning man.

When mobile telephones are being tested in the field, you always have to comply with the mobile telecom operator's rules.

Obviously, this also applied when we were testing a model for the Japanese market, provisionally known as the Miyako-Emilia.

When we were leaving the Osaka Business Park on our way back to Ericsson's office in Osaka, we found ourselves walking along a river where we saw some young people on skateboards on the other side of the river.

They were yelling and shouting the way youngsters do. But five minutes later we could still hear cries, even though they were almost out of sight.

The cries were coming from the river itself. We went onto a bridge and I looked down into the swirling waters. I heard the cries again and then I saw a man in the river. He was trying to keep his head above the water by holding onto some rocks near the quayside.

We called the police on our Miyako-Emilia telephone, although strictly speaking we were not supposed to use it. I then ran down to the quay, found a rope and threw it to the man in the water.

He grabbed the rope and clung onto it desper-



ately. A little later, a boat appeared. We waved at it and it approached the man in the water.

The three men in the boat managed to pull him on board. At first he seemed to be lifeless, but then

he started breathing again.

The man's life had been saved, and we could continue to the office to prepare our test schedule and start our trials of Miyako-Emilia.

But all three of us in the "rescue team" – Hayashi-san, Itoh-san and myself – knew that Miyako-Emilia had already proved its capabilities in the KDP network.

Sören Andersson

## NOTEWORTHY

### The Eric Mascot 1

► The mascot that helps Ericsson to reach the youngest prospective mobile telephone customers in Australia is called Eric.

Children like to hug Eric and play with him. Many of them also dial their own telephone numbers on the key pad on Eric's stomach. Eric has previously appeared at the prestigious Australian Masters golf tournament, for example. In the future, Eric is expected to visit other sporting events and charity shows.

"Eric is very good publicity for the company," says Simone Larmer, who is in charge of public relations at Reflex Challenge. "The mascot is a great success, and it also gives Ericsson's mobile telephones a new image."



### The Eric Mascot 2

► Ericsson sponsors the Variety Club charity organization in New Zealand.

Variety Club tours the country in pre-1966 cars, sponsored by various large companies. The money raised goes to children in need. The mascot on the car roof is called Eric.



### Award trip for 28 students

► The Ericsson "Awards of Excellence in Telecommunications" prize for students at Greek universities specializing in telecommunications was founded by Ericsson's subsidiary in Greece.

There are seven universities in Greece offering telecommunications programs.

Each prize is worth 100,000 drachma (about SEK 3,000). This year, 28 students received an award. Nine of them will also be coming to Sweden to study Ericsson's operations.

### Lustrous star for 788 launch



► Claudia Schiffer, the top model, recently received a special invitation to spread a touch of glamour over the launching of Ericsson's 788 telephone in Dubai.

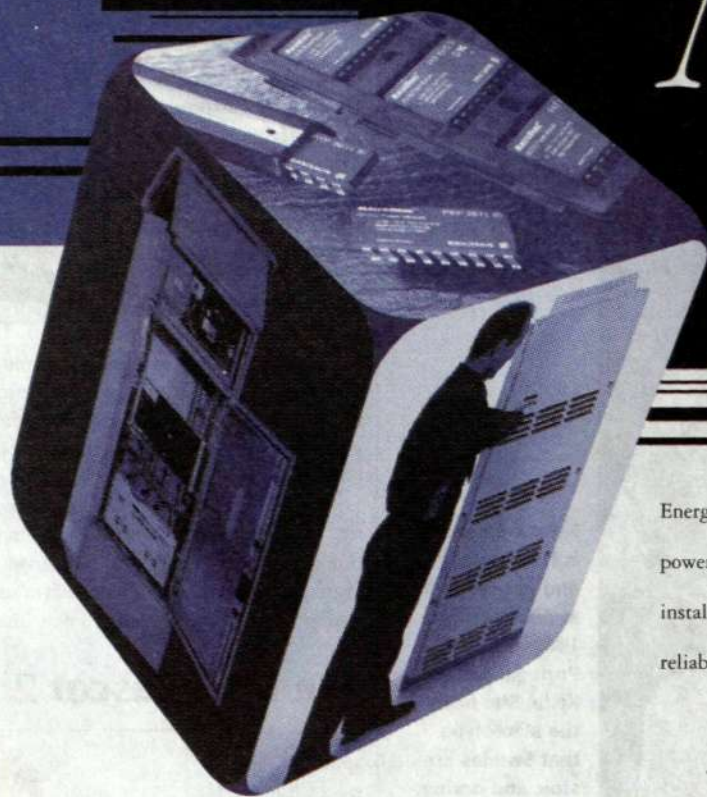
"The telephone is elegant, sophisticated and stylish, so Claudia Schiffer was the ideal guest," says Hans Söderberg, Ericsson's marketing manager for the Gulf region.

It goes without saying that Claudia uses an Ericsson phone these days.

### Free messages on the Web

► Mobile Telephone Networks (MTN) of South Africa is offering a Free Short Message Service (SMS) via the Web to GSM mobile telephones in more than 35 countries. MTN, Ericsson's largest customer in South Africa, is offering this service on its Web site.

# Masters of Energy



Energy Systems, as part of Ericsson Components, offers total energy solutions. These range from miniaturized power modules that fit directly onto circuit boards, up to complete energy solutions for large exchange installations. Companies throughout the world rely on Ericsson's energy solutions to power their systems reliably, shouldn't you do the same?

*Ericsson Components*

• ENERGY SYSTEMS • MICROELECTRONICS •  
• ELECTRONIC DISTRIBUTION •

**Energy Systems**  
Tel: +46-(0)8-721 60 00  
E-mail: [general@kkeka.ericsson.se](mailto:general@kkeka.ericsson.se)  
Internet: <http://energy.ericsson.se>

**ERICSSON** 

## Customer solutions



*Ericsson Cables provides overall solutions of products and services for cable networks.*

### PROPACK - customer solutions from Ericsson Cables

Time is money for you and your customers, especially in today's fast-moving telecom market where Time to Revenue is crucial for operators, both established and new. The faster you install a network, the quicker it can be put into service.

Using packaged solutions of pre-connected distribution frames is the key. Your installation crew has everything ready-to-install. Gone are the days of endless boxes of components and parts. So is the risk of ordering wrong parts, confusion, installation mistakes and wrong connections.

PROPACK is a complete range of network products from Ericsson Cables that are simpler and more convenient to design and order, faster to deliver and install on site, and easier to deploy in your networks.

PROPACK takes you into a new era in network product solutions; one designed with your needs in mind for faster and more cost-effective product packages that are easier to design and order, faster to deliver, more convenient to handle and quicker to install.

**Ericsson Cables**  
[www.ericsson.se/cables](http://www.ericsson.se/cables)  
[marketing@eca.ericsson.se](mailto:marketing@eca.ericsson.se)

**Network Products**  
Stockholm, Sweden. Tel: +46 8 764 09 00 Fax: +46 8 98 55 03

**Contracting**  
Stockholm, Sweden. Tel: +46 8 764 09 00 Fax: +46 8 764 08 13

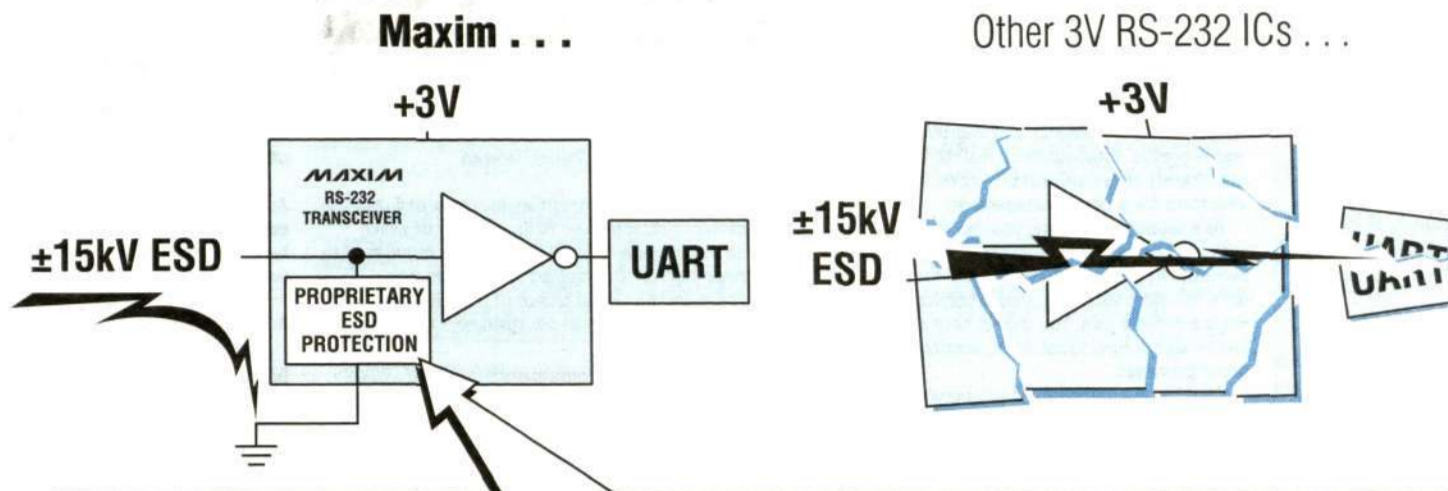
**Power Cables**  
Falun, Sweden. Tel: +46 23 684 00 Fax: +46 23 685 90

**Telecom Cables**  
Hudiksvall, Sweden. Tel: +46 650 360 00 Fax: +46 650 362 00

**ERICSSON** 

# WORLD'S ONLY $\pm 15\text{kV}$ ESD-PROTECTED 3V RS-232 ICs FOR NOTEBOOK PCs

Achieve  $1\mu\text{A}$  Supply Current and 1Mbps Operation!



Maxim's Industry-Recognized ESD/EFT Testing Ensures  
Compliance with International Standards on All RS-232 I/O Pins:

- ◆  $\pm 15\text{kV}$  IEC 1000-4-2 Air-Gap Discharge
- ◆  $\pm 8\text{kV}$  IEC 1000-4-2 Contact Discharge
- ◆  $\pm 15\text{kV}$  Human Body Model
- ◆  $\pm 4\text{kV}$  IEC 1000-4-4 EFT\*

## Select the Ideal $\pm 15\text{kV}$ ESD-Protected, 3V RS-232 IC for Your Notebook Design

PART	SUPPLY VOLTAGE RANGE (V)	NO. OF Tx/Rx	SUPPLY CURRENT ( $\mu\text{A}$ )	AUTO-SHUT-DOWN PLUS™	AUTOSHUT-DOWN™	ESD/EFT PROTECTION				EXTERNAL CAPACITORS ( $\mu\text{F}$ )	GUARANTEED DATA RATE (bps)
						HUMAN BODY MODEL (kV)	IEC 1000-4-2 CONTACT DISCHARGE (kV)	IEC 1000-4-2 AIR-GAP DISCHARGE (kV)	IEC 1000-4-4 EFT* (kV)		
MAX3241E	+3.0 to +5.5	3/5	300	—	—	$\pm 15$	$\pm 8$	$\pm 15$	$\pm 4$	4 x 0.1	250k
MAX3243E	+3.0 to +5.5	3/5	1	—	Yes	$\pm 15$	$\pm 8$	$\pm 15$	$\pm 4$	4 x 0.1	250k
MAX3244E	+3.0 to +5.5	3/5	1	Yes	—	$\pm 15$	$\pm 8$	$\pm 15$	$\pm 4$	4 x 0.1	250k
MAX3245E	+3.0 to +5.5	3/5	1	Yes	—	$\pm 15$	$\pm 8$	$\pm 15$	$\pm 4$	4 x 0.1	1M

AutoShutdown Plus is a trademark of Maxim Integrated Products. \* Pending completion of testing.



**FREE Interface Design Guide—Sent Within 24 Hours!**  
Includes: Data Sheets and Cards for Free Samples

Call For a Design Guide or Free Sample  
U.K. (44) 118 9303388, Sweden (46) 84445430  
Toll-Free in the U.S. 1-800-998-8800

**MAXIM**

<http://www.maxim-ic.com>

1998 EDITION!  
FREE FULL LINE DATA CATALOG  
ON CD-ROM



Distributed by Allied, Arrow, Bell, CAM RPC, Digi-Key, Elmo, Nu Horizons, and Zeus. Distributed in Canada by Arrow and Bell/Milgray.  
Maxim Sweden, (46) 84445430, FAX (46) 84445439; Austria, Maxim GmbH (Deutschland); Belgium, Master Chips; Czech Republic, Spezial-Electronic KG; Denmark, Arrow Denmark A/S; Finland, Berendsen Components Oy; France, Maxim France, Distributors: Maxim Distribution, IEC Distribution SA (ASAP-Euromega); Germany, Maxim GmbH, Distributors: Maxim Distribution, Spezial Electronic GmbH; Ireland, FMG Electronics; Italy, Maxim Italy, Distributor: Esco Italiana S.p.A.; Netherlands, Koning En Hartman; Norway, Berendsen Electronics; Poland, Uniprod, Ltd.; Portugal, ADM Electronics, S.A.; Russia, Spezial-Electronic KG; Spain, Maxim Distribución, ADM Electronics S.A.; Sweden, Maxim Sweden, Egevo AB; Switzerland, Laser & Electronics AG; Turkey, Inter Elektronik A.S.; U.K., Maxim Integrated Products (U.K.), Ltd., Distributors: Maxim Distribution (U.K.), Ltd., 2001 Electronic Components, Eurodis HB Electronics; Ukraine, Spezial-Electronic KG.

# 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. 12 1998

Updated August 31

### Ericsson Radio Systems AB, Sundbyberg

#### NEW CHALLENGE - RUSSIA

We have new business opportunities in RUSSIA! A great number of new GSM 1800 licenses have been released. We therefore need to strengthen our marketing and sales activities in the country. Initially the successful candidate will start with an introduction period in Stockholm. The position is a long-term assignment based in Moscow.

#### NEW ACCOUNT MANAGER

● As a New Account Manager you will work with new sales opportunities and commercial support to potential customers. You will be a part of the marketing and sales team towards new customers. You will be responsible for marketing and sales activities, create and maintain market plans and together with our home organisation prepare and negotiate offers and contracts, be responsible for budget and forecasts and establish long-term partnerships towards our future customers.

You will be involved throughout the whole sales process starting with the initial sales activities, tender preparations to contract negotiations and our extensive service offering. You will be working in a stimulating environment and have close contact with the home organisation.

Preferably you should have an M.Sc. and you should have at least seven years working experience within Ericsson and desirably five years with cellular systems and preferably with GSM experience. You are able to build excellent relations and drive for results. It will be a benefit if you have experience from working in Russia. Working knowledge of the Russian language is a plus.

**Contact:** Ulf Borison, +46 8 757 1580, memoid: ER-AC:ERAUBOR Peder Möller, Human Resources, +46 8 757 2545 Application: Ericsson Radio Systems AB SG/ERA/LP/HA Siw-Britt Johansson 164 80 STOCKHOLM Siw-Britt.Johansson@era.ericsson.se

### Ericsson d.o.o. Belgrade, Serbia - EYU

#### HUMAN RESOURCES MANAGER

RMOG have a new GSM customer in Serbia and our activities are expanding rapidly. We are now looking for an experienced Human Resources Manager to our office in Belgrade. We offer a 12 months assignment with long-term contract conditions.

● You will be responsible for building up a human resources function, establishment of routines in the HR area and implementation of policies and procedures according to Ericsson standards. Your tasks will also include recruitment of expatriate and local staff, expatriate management, advice and support to the managers in HR issues, co-ordination of training and competence development activities. An important part of your role will also be to build up a local HR function capable of taking over the responsibility after a period of approximately one year.

To be successful in this position you should have a relevant B.Sc. degree or equivalent and at least five years experience in qualified HR work preferably in a human resources management position. You must have a good knowledge of Ericsson's personnel policies, working methods and tools within the HR area. You need to be organised, flexible and possess a lot of drive and determination combined with a humble attitude. Good English and computer skills are a necessity. Previous experience from working or living abroad is a merit.

**Contact:** Jan Hultgren, President EYU, phone +381-11 311 38 99 or Peder Möller, Human Resources, phone +46-8-757 25 45 Application: Ericsson Radio Systems AB SG/ERA/LP/HA Siw-Britt Johansson, 164 80 STOCKHOLM Siw-Britt.johansson@era.ericsson.se

### Ericsson Eurolab Deutschland GmbH, Aachen

#### PROCESS ENGINEER

● The main responsibilities are the improvement of work processes within the AMC organization and monitoring the usage of the AXE 108 methods in projects. The position is located at Ericsson Eurolab Deutschland GmbH, Herzogenrath, and reports to EED/U/OQC.

The main tasks include: Coordination of process management (PM) activities. Project management of PM projects. Maintenance and improvements of design processes. Establishment, maintenance and improvements of operational processes. Being the driving force for process management.

As a suitable candidate, you should be familiar with the Ericsson-way-of-working and the existing processes in your current work area. Knowledge of different methodologies used in software engineering is a definite plus. You should have a very good knowledge in how to establish, maintain and improve processes.

Working as a moderator and consultant a structured way of thinking, excellent communication and cooperation skills, perseverance and the ability to be the driving force for PM are important personal qualities. Overall you should see this job as a challenge in improving our existing way of working. Participation in international AMC meetings is also part of the job. Fluency in written and spoken English is a must.

**Contact** latest 981015: Human Resources Simon Seebass, Memo-Id: EED.EEDSIMS, Dial:+49 2407 575 163 or Manager Methods & Quality AMC Andreas Bleeke, Memo-Id:EED.EEDANB, Dial: +49 2407 575 394

Our AXE Mobile Core (AMC) system groups need additional

#### PC-XSS SUPPORT

The AMC system groups are responsible for the system development of the core products used commonly by all Ericsson's digital mobile systems ie. CME20 (GSM), CMS30 (PDC), CMS40 (PCS) and CMS88 (D-AMPS). Running PC-AXE 106 Mobile, PC-XSS 210 25 as well as overall technical coordination of the projects in AMC are responsibility areas of the system groups. To be able to handle all the responsibilities assigned to PC-XSS, there is a need to involve one additional person that could support the chairman, and in the long run take over the responsibility for PC-XSS.

PC-XSS is an inspection forum, and the purposes 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 cannot come to a common decision. Handle allocation of functionality to products.

● We are looking for an AXE software designer with 2-3 years experience, who is interested in developing the overall system competence and 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:** Human Resources Simon Seebass, Memo-Id: EED.EEDSIMS, Dial: +49 2407 575 163 AMC System Kristina Martelius, Memo-Id: EED.EEDNKA, Dial: +49 2407 575 692

The System House GPRS (EEDID) is responsible for the successful development of products and applications for the GPRS bearer service. The Unit Product & Operations (IDIP) just recently got the assignment to build up the Central Configuration Management (CCM) for Ericsson's GPRS products. For this ambitious task we need your help. We are looking for a

#### CONFIGURATION MANAGER

● who will enable us to secure, enhance and extend our current configuration management activities in the areas of: Development Environment (ClearCase, imake). Software/System Builds. Integration of PRIM/GASK/Trouble Reporting Tools. Trouble Report Handling (Introduction of ClearDDTS).

As a technical CM you need a good understanding of software version control, UNIX and Makefile systems. Knowledge of ClearCase and/or imake is an asset.

The department and Human Resources will support you in all areas needed. You need to bring initiative, very good communication and cooperation skills as well as a good ability to work under pressure.

**Contact** latest 980928: Human Resources Simon Seebass, Memo-Id: EED.EEDSIMS, Dial: +49 2407 575

163 EED/D/PC Stefan Eissing, Memo-Id: EED.EEDSTE, Dial: +49 2407 575 159

### Ericsson Taiwan Ltd, Taipei, Taiwan.

Taiwan is a highly competitive market with 6 country-wide networks split over 10 licenses out of which Ericsson has delivered to 3 licenses. This requires us to provide high quality support to our customers.

Following successful launch of GSM 900 and 1800 networks here in Taiwan our customers network are growing very fast.

We are therefore looking to increase our competence and add the following people to work in our FSC.

#### FSO MANAGER, CME 20 PRODUCT SUPPORT

● Job description: To lead and coordinate Trouble Shooting on products in CME20 in customer's GSM Networks in Taiwan.

Key responsibilities: Co-ordinate the support to Customer's O&M and Trouble shooting teams in CME 20 products in GSM System. Lead technical competence transfer to Local Staff. Co-ordinate implementation of SW corrections and upgrade packages. Work most of the time without direct supervision

Requirements for the job: 5 years experience of AXE and at least 2 years experience of CME20.

**Contact/Application:** Martin Sadle ERT.ERTMASA tel.: +886 2 2746 1909. Send application and CV to Genevieve Lu ERT.ERTGELU +886 2 2746 1780.

#### BSS PRODUCT SUPPORT

● Job description: To handle Trouble Shooting on products in the BSS product line of CME20 in customer's GSM Networks in Taiwan.

Key responsibilities: Support to Customer's O&M and Trouble shooting teams in BSS products in GSM System. Technical competence transfer to Local Staff. Involved in implementation of SW corrections and upgrade packages. Work most of the time without direct supervision

Requirements for the job: 3 years experience of AXE and at least 1 years experience of CME20.

**Contact/Application:** Martin Sadle ERT.ERTMASA tel.: +886 2 2746 1909. Send application and CV to Genevieve Lu ERT.ERTGELU +886 2 2746 1780.

#### SENIOR ENGINEER, UNIX BASED PRODUCTS SUPPORT

● Job description: To support and maintain the UNIX Based Network Elements such as OSS and BGW in GSM Network's in Taiwan.

Key responsibility: Trouble shooting, support customer's Operation and Maintenance of UNIX Based Network Elements in the GSM System. Those Elements includes BGW and OSS. Trouble shooting and support customer's requests of network protocol (ex. X.25, TCP/IP) and database (ex. Sybase), which are used in the UNIX System Network. Co-ordinates local or foreign second line Sun/VAX/UNIX experts for fixing advance UNIX system problems. Work most of the time without direct supervision. Transfer technical competence to support engineer.

Requirements for the job: 3 years experience of TMOS and at least 1 year experience of CME20.

**Contact/Application:** Alex Kuang ERT.ERTAKU tel. +886 2 2746 1759 or Martin Sadle ERT.ERTMASA tel.: +886 2 2746 1909. Send application and CV to Genevieve Lu ERT.ERTGELU +886 2 2746 1780.

### Infocom Management Solutions in Athlone, Ireland

#### SENIOR MANAGEMENT OPPORTUNITY IN NETWORK TRAFFIC MANAGEMENT (NTM)

PLU Telecom Management (TM) and the Infocom Management Solutions (IMS) Division within Ericsson Systems Expertise Ltd. have reached an agreement on the creation of a Network Traffic Management (NTM) Competence Centre in Athlone. The development of this business driven centre will be determined by its market success. Its aim is to provide our customers with best-of-breed NTM solutions.

The new unit will draw on resources and expertise from within TM and IMS.

● We are looking for a Senior Manager to take responsibility for this new business.

The responsibilities include the following: To manage and develop an NTM unit with demanding revenue and operational targets. To provide best-of-breed NTM solutions to our customers. To manage the build up of a Cross Functional Team (CFT), which requires the following competencies; Marketing and Sales, Product Management, Product Provisioning and Systems Management. To provision NTM solutions, including Systems Management. To report to a steering group drawn from both TM and IMS.

Profile: The candidate will be an experienced Manager and have demonstrated a strong business orientation. He/she will be capable of working easily towards customers and across Ericsson organisational units.

He/she will: relish the challenge to work widely within Ericsson to increase our NTM market share. understand the market and the component suppliers to that market. be able to provision solutions rapidly using best known development methods.

Application latest 980911: EEI/SH Michael McGann, eeimmg@eei.ericsson.se. As a screening process based on applications received will take place, it may not be necessary to interview all applicants.

### Ericsson Australia Pty, Ltd.

#### MANAGER TENDER/BID GROUP

Supply Control Centre Serving 17 Asia Pacific Markets

● Do you have broad business process knowledge including technical and commercial? Are you a dynamic individual, driven to succeed and comfortable with tight deadlines? Do you have proven leadership, communication and team skills across all management levels?

THEN LOOK NO FURTHER - THIS IS THE ROLE FOR YOU !!

The Asia Pacific Supply Control Centre is experiencing an unprecedented increase in orders for Tender and Bid Support for major projects in Asia Pacific and South Asia markets, necessitating the establishment of a Tender/Bid group. De-regulation of telecommunications markets in S-E Asia in the near future is expected to increase this workload further.

Reporting to the General Manager CPO, you will be responsible for establishing the SCC Tender/Bid team including all processes, interfaces and work routines PLUS the quality and timeliness of Tender/Bid inputs. Your team will work across all key suppliers and service providers, gathering technical and commercial inputs, then proposing and documenting complete solutions to meet Market Unit business needs. Strategic communication with internal/external customers, stakeholders and peer groups (eg RMU, LC, MoMs) will be fundamental to your success and international travel is envisaged.

Previous experience in managing customer relationships and major tenders/projects is fundamental to this role. Cultural awareness and knowledge of the Asia-Pacific region will be well regarded.

If you are looking for a change of focus, exciting challenges and significant career development potential, then this is the role for you.

Key attributes required by the successful applicant are: Experience in managing Tenders/Bids for major projects. Broad business skills covering commercial and sales/marketing. Excellent organisational and communication skills. Demonstrated leadership ability. Strong Customer management skills. A DRIVE TO MEET GOALS, ON TIME!!

This position will be filled as a local offer.

**Contact:** Ron Brymer on extension 1252.

Application: P/ES Hadjer Kerber

#### TENDER/BID MANAGERS

● Reporting to the Tender/Bid Manager, you will be responsible for working across all key suppliers and service providers, gathering technical and commercial inputs, then proposing and documenting complete solutions to meet Market Unit business needs.

QUALITY and TIMELINESS of Tender/Bid inputs will be your KEY focus. Strategic communication with internal/external customers, stakeholders and peer groups (eg RMU, LC, MoMs) will be fundamental to your success and international travel is envisaged.

Previous experience in managing customer relationships and major tenders/projects is fundamental to this role. Cultural awareness and knowledge of the Asia-Pacific region will be well regarded.

Looking for a change of focus, exciting challenges and significant career development potential, then this is the role for you.

Key attributes required by the successful applicants are: Experience in managing Tenders/Bids for major projects. Broad business skills covering commercial and sales/marketing. Excellent organisational and communication skills. Demonstrated leadership ability. Strong Customer management skills. A DRIVE TO MEET GOALS, ON TIME!!

These positions will be filled as local offers.

**Contact:** Ron Brymer on extension 1252.

Application: P/ES Hadjer Kerber.



**Ericsson Eurolab Deutschland GmbH, Aachen**

The Systemhouse GPRS (General Packet Radio Services) is responsible for the development of products in the field of GPRS and Telecommunications Management (TMOS). GPRS is aiming for the combination of data communication and mobility. GPRS is currently standardized as an extension of GSM. The department EED/ID 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 two

**GPRS SENIOR SOFTWARE DESIGNERS**

● The main tasks for the position are: either design of the GPRS bearer service (SMS, VLR, class A/B mobile support) or O&M product development (OMS,PXM)

The job is performed in teams with a large degree of responsibility and authority, comprising all parts of the product life cycle from early requirement analysis up to maintenance after GA. There will be a close cooperation with the I&V subproject at EED. Thus, we have the opportunity to see our products being integrated and verified in the real GSM datacom network.

As the GPRS organization is still rather young, there is the freedom to be pioneer for processes, system architecture, usage of programming languages and platforms. On the other hand, we have well defined projects and clear delivery deadlines for our assignments.

For the GPRS bearer service, the languages ER-LANG, C and JAVA are used. O&M applies C++, JAVA, ERLANG and the CORBA architecture.

We are looking for persons with proven experience in the technical domain and a strong team orientation. A solid SW engineering background is a requirement. Either local or expat contracts can be offered for these positions.

**Contact:** Human Resources Simons Seebass, Memo-id: EED.EEDSIMS, Dial:+49 (0)-2407-575-163 or GPRS Design Manager Andreas Daun, Memo-id: EED.EEDAND, Dial: +49 (0)-2407-575-163

**Ericsson Data Malaysia****SAP R/3 CONSULTANTS ASIA PACIFIC**

● Ericsson Data in Malaysia looks for experienced SAP R/3 Consultants to be the key players in building the Ericsson SAP Competence Centre in the Asia Pacific region.

We believe that you have worked as a Business Consultant, Project Manager or Applications Consultant in the SAP R/3 area for a few years and feel it is time for a true challenge (probably) far away from your current workplace. With your background we expect you to have a broad and deep knowledge about R/3 and that you have the ability to share your knowledge with others.

We also expect that you are a person that, get things done, work very well with other people (as well as on your own) and enjoy working in a demanding but positive environment. That you are fluent in English and prepared to travel.

You will be working in three main areas: SAP R/3 implementation projects. Competence development of others. Establishment of the Ericsson SAP Competence Centre in Asia Pacific.

The placement of the positions will be in Kuala Lumpur in Malaysia. Are you interested?

**Contact:** Mikael Hansson on mobile +46 70 591 73 02 or email mikael.hansson@edt.ericsson.se Memo ID: EDT.EDTHAMI Or Björn Taube on mobile +46 70 662 03 45 or email bjorn.taube@edt.ericsson.se Memo ID: EDT.EDTBJTA Or Wong Pooi Yin on phone +603-7087112, email ecmwpy@xchg.emy.ericsson.se Memo ID: ECM.ECMWPY

**Ericsson Research Canada****SYSTEMS ENGINEER FOR BASIC SYSTEMS**

LMC/NXM has the responsibility for the systems management for the CMS8800 switching system in the areas of AMC, basic systems and mobile applications. As a systems engineer in Basic Systems you are responsible for the project & technical coordination activities needed to ensure the successful integration of new APT hardware and APZ platforms within the CMS88 switching platform. In addition, you will be responsible to ensure that systems improvements related to platform issues are relayed to SPM for consideration as new requirements to UAB.

● The role involves monitoring of the deliverables from UAB, e.g. in the APZ and HWM development projects to ensure that the delivered content and timing is in line with the overall project objectives. In addition, support will be provided to TCM, AS specification, Integration & Verification and FOA activities within the main CMS8800 development project.

To be successful, you should have a University level (or similar) technical qualification, preferably in electronic or communication engineering, and should have a minimum of three years testing, design or CM experience related to AXE Basic Systems, preferably

in APZ and/or the Hardware Modernisation program. You should have strong communication and analytical skills with high self-motivation.

**Contact/Application:** LMC/NXM Adrian Wilson (LMC.LMCADWI or lmcadwi@lmc.ericsson.se) tel:+1 514-345-7900 ext 5335. Applications should be accompanied by a recent CV.

**Ericsson Research Canada****SYSTEMS ENGINEER**

LMC/NXM has the responsibility for the systems management for the CMS8800 switching system in the areas of AMC, basic systems and mobile applications. As a systems engineer you are responsible for: overall systems design; preparation and clarification of detailed requirements; performing quick studies and technical investigations; providing technical support to SPM and to development projects for feature implementation; participation in system evolution studies; participation in standardisation activities. You will also contribute to the network and nodal modelling activities in the REME process.

● To be successful, you should have a University level (or similar) technical qualification, preferably in electronic or communication engineering, and should have a minimum of three years experience in AXE system/software design. You should have strong communication and analytical skills with high self-motivation.

Experience in one or more of the following areas is desirable: Trunk signalling (SS7, CAS), Axe Mobile Core, mobile features within the CMS8800 system, third generation technologies and external technologies such as third party products.

**Contact/Application:** LMC/NXM Adrian Wilson (LMC.LMCADWI or lmcadwi@lmc.ericsson.se) tel:+1 514-345-7900 ext 5335. Applications should be accompanied by a recent CV.

**Ericsson (Thailand) Ltd.**

If you are looking for a new challenge this is a great opportunity. We are offering a good job package, in a good work environment, with many chances to new and stimulating experiences.

For our System Services unit we are seeking competent and experienced GSM, NMT and O&M staff. The required commencement period for the positions below is November 1998-January 1999.

**GSM SENIOR SUPPORT ENGINEER**

● Reporting to: Manager, Customer Support Office, Cellular Networks

Job description: Support of the GSM system installed in Thailand, i.e.: implementation of software updates and upgrades, provide technical advice, trouble report handling, trouble shooting, site audits and system performance reviews, guide and direct the customer to use proper O&M routines and Procedures, etc.

Qualifications, The applicant must: have a minimum of 5 years experience from related field. have in-depth knowledge of the GSM MSC and/or BSC systems. be well acquainted with the Ericsson support routines and support organization. have good command of English, spoken as well as written. have good communication skills. have a pleasant and customer oriented personality. have the ability to lead and take initiatives.

**NMT SENIOR SUPPORT ENGINEER**

● Reporting to: Manager, Customer Support Office, Cellular Networks

Job description: Support of the NMT system installed in Thailand, i.e.: implementation of software updates and upgrades, provide technical advice, trouble report handling, trouble shooting, site audits and system performance reviews, guide and direct the customer to use proper O&M routines and procedures, etc.

Qualifications, The applicant must: have a minimum of 5 years experience from related field, have in-depth knowledge of the NMT MTX system, be well acquainted with the Ericsson support routines and support organization, have good command of English, spoken as well as written, have good communication skills, have a pleasant and customer oriented personality, have the ability to lead and take initiatives.

**RBS SENIOR SUPPORT ENGINEER**

● Reporting to: Manager, Customer Support Office, Cellular Networks

Job description: Support of the RBS9000 (NMT) and RBS200/2000 (GSM) system installed in Thailand, i.e.: software handling, provide technical advice, preventive maintenance support, trouble shooting, site audits and system performance reviews, guide and direct the customer to use proper O&M routines and procedures, etc.

Qualifications, The applicant must: have a minimum of 5 years experience from related field, have in-depth knowledge of the NMT and/or GSM base station systems, be well acquainted with the Ericsson support routines and support organization, have good command of English, spoken as well as written, have good communication skills, have a pleasant and

customer oriented personality, have the ability to lead and take initiatives.

**O&M CONSULTANTS**

● Reporting to: Manager, Telecom Operations Services

Job description: For a customer in Thailand, Ericsson has been requested to assist in the transfer of operation and maintenance competence. The job means to implement routines and procedures in a number of regional OMCs, i.e.: assist in developing operational manuals for the Ericsson equipment (NMT MTX and RBS), on-the-job training at the OMC, in order to secure that the staff follows the manuals properly, assist in solving operational problems at the OMC, certify the staff at the OMC, etc.

Qualifications, The applicant must: have previous experience from network operations. have general technical knowledge about Ericsson equipment, mainly NMT switching and/or radio base station. be well acquainted with technical and operational routines for Ericsson equipment, have good command of English, spoken as well as written, have good communication skills, have a pleasant and customer oriented personality, have the ability to lead and teach others,

**Contact/Application:** Dan Olsberg, ECT.ECTDANO, tel. +66 2 2997450 or fax +66 2 2997454. Ericsson (Thailand) Ltd., Suntowers B, 123 Vibhavadee Rangsit Road, Chatuchak, Bangkok 10900, Thailand.

**Ericsson Ltd, UK****UNLOCK YOUR POTENTIAL AT NEW PUBLIC NETWORKS**

As a result of major account growth in the public switching market in the UK, we need a number of experienced Project Managers and Programme Managers to support our customer accounts. Vacancy numbers are as follows:

- CN320 Programme Manager - Recruiting Manager, Chris Pratt
- CN323 Project Manager - Recruiting Manager, Colin Atkins
- CN329 Project Engineers, Enhancement - Recruiting Manager, James Coe

Our aggressive style coupled with a strong product portfolio has enabled our unit to grow from 0 to 850MSEK sales in 5 years which means there are many opportunities to make a real contribution to the success of the unit. In addition, 1998 has been a record year to date with excellent prospects for year end achievement.

All positions require: Demonstrated project management experience with a working knowledge of project methods and tools. AXE Product knowledge. Excellent interpersonal skills to liaise with internal Ericsson suppliers and customers, support personnel, as well as third parties. Ability to take full responsibility for the overall management of a specific customer project(s) in a complex, changing environment.

Salary and benefits will reflect the experience, skill, competence and role.

All positions are based in Guildford, 30 mins away from London and offering excellent local facilities and quality of life. Interested? Then please ask for more information from:

**Contact:** Chris Pratt Operations Director ETL.ETLW-CPT Application: Louise Smith HR Manager ETL.ETLLESH

**Telefonaktiebolaget LM Ericsson (TKE), Egypt****NEXT CHALLENGE - EGYPT**

Ericsson in Egypt is growing because of new customers. We therefore urgently need to the local company and the GSM project following persons.

**PROJECT CONTROLLER**

(Short-term, approx. 6 months)

● As Controller, you will ensure that a full budgetary, financial management and analysis service is provided in the GSM project, in particular through development and implementation of management information to support planning and follow ups.

You will be responsible to provide financial advice concerning setting, monitoring and achievement of project targets, and work closely with the Operations Director and the Finance Manager to ensure that the financial implications of alternative courses of action are explored in advance of key project decisions.

You will act as Controller, advising and reporting from a financial perspective on the projects operations. You will also have the responsibility to train one local employed Controller under the assignment.

You should have long experience of accounting, income statement/balance sheet analysis, financing, tax planning, consolidation and administration. University degree (B.Sc.) or similar education in accounting and/or Finance. Good spoken and written English.

**QUALITY MANAGER**

● To secure good quality within the office and in the projects, a project independent quality function is needed. The QA Manager will ensure complete

customer satisfaction and quality. The person will have the full responsibility to build and implement QA, Process Management and Methods in the company. The position needs a very experienced person who have earlier been involved with building similar functions.

For the above positions we are looking for experienced, outgoing, independent and self motivated people. You must have excellent interpersonal and communication skills and be result oriented and a team player. Earlier Manager experience is essential. Good spoken and written English.

**Contact:** Johan Gyllenswärd, General Manager TKE, +20 2 303 6524 E-Mail: XCOM.TKEGDJ Göteborg Hedblom, Human Resources Manager TKE, +20 2 303 6524 Memoid: ERAC.ERAGGHE For the Controller position: Bengt Franzén, Finance Manager ERA/LP, +46 8 404 7943 Memoid: ERAC.ERABFRA Application: Ericsson Radio Systems AB SG/ERA/LP/HA Siw-Britt Johansson, 164 80 STOCKHOLM

**Ericsson Telecommunications Sdn Bhd, Malaysia****DEPARTMENT MANAGER**

We now require a qualified, competent and highly experienced departmental manager to manage a pool of RBS and Transmission implementation resources. This position entails the following qualifications and responsibility:

● Qualifications: Minimum of 6 years of working experience in telecommunications industry particularly in GSM telephony network with deep involvement in RBS and Transmission project implementation and resource planning. Sound technical knowledge with a minimum of 3 years experience in supporting telecommunications network. Strong interpersonal and leadership skills to lead and motivate a group of project implementation resource personnel.

Key responsibilities: To manage RBS and Transmission implementation resources. To implement an effective resource planning within the resource center and customer divisions. To monitor the status of resource utilisation. To liaise with support and product divisions as well as ERA product units with regard to technical update, new product release and rollout.

To be overall responsible for planning and development of competency build-up as to cater for current and future product and market requirements. To provide technical assistance, support and guidance to sections heads in areas of installation, testing and commissioning of RBS and Transmission equipment.

**Contact:** Leong Pak Kwan - Divisional Manager of Operations, PEM.PEMLEON or Ng Ho Keng, ECM.ECMNHK

**Ericsson Eurolab Deutschland GmbH**

Ericsson Eurolab Deutschland GmbH, our young Research & Development centre in Herzogenrath, near Aachen, offers new challenging positions within CSS System House. The Mobile Switching Design Department EED/XP within our CSS System House is responsible for the design of the Mobile Switching sub-system for the CME20/CMS40 Switching System. The department activities include design of new functions and products, CME20 SS Maintenance, function test as well as the investigation of future design. In order to prepare for the coming years and to provide for a flexible focused project organization as well as to guarantee to have the right competence at the right time we are looking for a

**COMPETENCE MANAGER**

● The Competence Manager is part of the EED/XP management team consisting of one Frame Manager, two Operations Managers, three Competence Managers and the Department Manager. You are responsible for 25-30 individuals from all different disciplines within the department.

As a competence manager your main tasks are to monitor market and technology development to identify future competence demands, developing people to meet business needs, being part of the assignment board, planning of resources, preparing resource contracts for the project organisation, regular competence and performance talks with individuals, reviewing/ setting of salaries, planning of career development, staying in touch with ongoing operations.

You need to build up strong interfaces to employees, team leaders and the different members of the management team as well as to establish contacts to different competence management organisations within Ericsson (e.g. ETM, EEI).

You should have a strong interest in human beings and have some leadership experience (project/team/line). You should have a refined sense for picking up signals and you should be very good in communication.

**Contact:** Simon Seebass, EED/H, +49 2407 575 163, EED.EEDSIMS or Arthur Sliepen, EED/XP, +49 2407 575 141, EED.EEDARS, or one of our competence managers: Gina Roeger, EED/XP, +49 2407 575 254, EED.EEDGINA, or Dave Henderson, EED/XP, +49 2407 575 631, EED.EEDHE.

# Ericsson Eurolab

## Location Herzogenrath AXE Mobile Core (AMC)

The AXE Mobile Core (AMC) System House is responsible for development of core products used commonly by all Ericsson digital mobile systems i. e. CME20 (GSM), CMS30 (PDC), CMS40 (PCS) and CMS88 (D-AMPS). Our AMC System House at EED consists of the AMC operations and the design & test department. The AMC operations department is overall responsible for all activities from requirement management to integration test at our 15+ design centers working for AMC. We are organized into product-, systems-, project-, quality- & methods-management. We also have an AMC lab group responsible for pre-development and prototyping.

The AMC design & test department (former TCS) is responsible for development within product area traffic control and overall for function and system integration test activities within AMC.

### PC-XSS Support

Proj.-No.: 08/398

The AMC system groups are responsible for the system development of the core products used commonly by all Ericsson digital mobile systems. Running PC-AXE 106 Mobile, PC-XSS 210 25 as well as overall technical coordination of the projects in AMC are responsibility areas of the system groups.

To be able to handle all the responsibilities assigned to PC-XSS, there is a need to involve one additional person that could support the chairman and in the long run take over the responsibility for PC-XSS.

PC-XSS is an inspection forum with the following purposes

- 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 cannot come to a common decision
- handle allocation of functionality to products

We are looking for an AXE SW designer with at least 3 years experience, who is interested in developing the overall system competence and 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:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Kirstina Martelius  
EED.EEDNKA  
+49 2407 575 682

### AMC 7 Technical Coordinator

Proj.-No.: 15/398

One of the responsibilities of the Systems Group is the technical coordination on AMC main level. The AMC Technical Coordinator coordinates technical issues involving several subprojects, the related mobile applications projects and associated projects within the CME20, CMS30, CMS40 and CMS88 systems. The AMC main Technical Coordinator also supports the subproject Technical Coordinators. To strengthen our capabilities on technical coordination, we are looking for an experienced system designer with more than 3 years of Ericsson experience in AXE10 design. You will most probably share the working tasks with another Technical Coordinator.

We are particularly interested in someone who can provide competence in ONE OR MORE of the following areas: AM System Development, Signalling, Data Communication, ATM, O&M, Resource Modules, IN Development, Business Communication Fixed Access, UMTS, Hardware Modernization. Furthermore good communication skills and organisational talent is requested. Due to the type of work performed, some travelling may be necessary.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Gert Wallin  
EED.EEDGEW  
+49 2407 575 8058

### AXE10 DATACOM ENGINEER

Proj.-No.: 16/398

The border between telecommunication and data-communication is becoming more and more diffuse. AMC needs to strengthen the competence in the datacom area focusing especially on mobile interworking and TCP/IP. We need a person to represent AMC on the system level and to contribute to the evolution of datacom within AXE10. Your responsibilities would be to perform datacom system studies, investigations and to develop data-

com 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, preferably TCP/IP and/or mobile Datacom experience.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Gert Wallin  
EED.EEDGEW  
+49 2407 575 8058

### AXE10 SYSTEM DESIGNER

Proj.-No.: 21/398

AMC System activities are steadily growing, mainly due to fixed mobile convergence. To meet this challenge we need to expand.

We are participating in early project phases and are performing pre- and feasibility studies. We are also evaluating new technologies and perform tasks which require high competence and professionalism.

To strengthen our capabilities for this type of system work, we are looking for an experienced system designer with more than 3 years of Ericsson experience in AXE10 design.

We are particularly interested in candidates who can provide significant competence in one or more of the following areas: AM System development, Signalling, Data Communication, O&M, Resource Module Platform, Hardware Modernization, PDC system, D-AMPS system. Due to the type of work performed, some travelling may be necessary.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Gert Wallin  
EED.EEDGEW  
+49 2407 575 8058

### Strategic Product Manager

Proj.-No. 20/398

The Strategic Product Manager will be responsible for the product planning of product areas concerned as: ISDN Access (PRA, BA, V 5.2, ...), Network Signal.

Within product planning, you define the direction of the development of the AMC products based on your assessment of the competitiveness and economical performance of the product over the entire life-cycle.

You inspect requirement specifications and approve function specifications. For your product area(s) you prepare the financial frame agreements with the Local Design Centers and order the development and maintenance work of AMC products. Review of the financial agreements proposed by other business units is also included.

As a suitable candidate you should have a technical background with at least 3 years of job experience, preferably in systems design and/or project management.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Ola Melander  
EED.EEDOME  
+49 2407 575 255

### SYSTEM TEST ENGINEERS

Proj.-No.: 31/98

These projects perform in an international environment and cover a vast range of development areas at the leading edge of technology, such as ISDN, IN and Internet accesses.

Your main authorities and tasks comprise:  
- Definition of the prerequisites to perform a verification of the test object on AMC level in both target and simulated environment.  
- Performance of the test execution and reporting of the result verification.  
- Trouble shooting.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication and cooperation skills. The ability to work under pressure is also an important personal feature.

Furthermore, fluency in written and spoken English is pre-requisite. Experiences from System Verification/Test are of clear advantage.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Mats Erlansson  
EED.EEDMERL  
+49 2407 575 635

### AXE10 SOFTWARE DESIGNER

Proj.-No.: 34/98

AXE Mobile Core TCS development is responsible for design and maintenance for subsystem TCS within AMC and function/system test for AMC. We are participating in the execution phase and performing feasibility studies. To strengthen our capabilities in this area we are looking for an

experienced SW designer in the AXE 10 area. You should be familiar with PLEX design methods and be able to perform technical studies as well as preparing technical documentation. You should be flexible and cope with a dynamic environment. A first experience in UML or SDL would be an advantage.

We are looking for a designer with 2-3 years of experience preferable in the AXE 10 area. Furthermore, fluency in written and spoken English is required.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/U/OTC  
Jo Wilke  
EED.EEDJOW  
+49 2407 575 399

## Circuit Switching Systems (CSS)

Our CSS System House in Herzogenrath/Aachen is part of the huge GSM family and involved in nearly all activities from requirement definition to customer supply and support around the Circuit Switching System (CSS) of AXE/CME20:

- Systems Design and Operational Product Management (EED/X/D)
- CSS/GSM Project Office (EED/X/R)
- Software Design for MSS and MMS (EED/X/P)
- INDUSTRIALIZATION, Test Configuration Management, Product Line Maintenance (EED/X/S)
- World Class Provisioning of GSM products (EED/X/T)
- Software Supply and Support (EED/X/Y)

### System Engineering and Product Management

Migrating from GSM to the Future

Proj.-No. 07/398

We are working in the area of GSM 900,1800 and 1900 systems. We are looking for people who like to design the evolution of our GSM markets to the next generation of networks in a responsible positions.

We are the right place for business-oriented system engineers that like to work for UMTS, Internet networks, GSM systems and mobile data. You directly control the next version of Ericsson's products in the mobile world market. You are responsible for European standardization (ETSI) and you join also sales teams in Europe and middle East to boost Ericsson's market success.

Suitable candidates are familiar with system engineering of 3-5 years of AXE. Being a technical coordinator, project leader, doing marketing descriptions, giving customer presentations and doing technology evolution in the forefront of telecommunication development should give you the fun professional life has to offer.

You should enjoy to work on an entrepreneurial basis and have the ability to set the right priorities within an everchanging environment. Business trips to European standardization gremia, Stockholm as well as to customer sites will enrich your day to day life.

Please contact:  
Frank Adelhardt, tel. +49-2407-575-287, eedfa@eed.ericsson.se;  
Andreas Thuelig, tel. +49-2407-575-246, eedat@eed.ericsson.se;  
Simon Seebass, Human Resources, tel. +49-2407-575-163, eedsims@eed.ericsson.se.

The CSS/GSM project office at EED in Herzogenrath is responsible for all GSM Circuit Switching System projects from TGO up to GA. We have the responsibility for overall CSS/GSM resource management, CSS/GSM Project road-map establishment and co-ordination of all MSC/VLR development operations based at EED, EUS, ERA, LMF and IXG.

### Overall Function Test Leader MSC/VLR R8

Proj.-No. 59/98

Your main tasks comprise ...  
- overall responsibility for MSC/VLR function test activities;  
- involvement in related projects like AMCph6 and GDB R8.

As a suitable candidate you have:  
- profound project management experience;  
- broad competence in the area of Circuit Switching and its environment;  
- the ability to work under pressure and to meet the tight deadlines.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/RTC  
Thomas Funke  
EED.EEDTFU  
+49 2407 575 546

EED/X/RC  
Abbas Sabokbar  
EED.EEDSAAB  
+49 2407 575 135

### Total Project Manager for CSS/GSM R9

Proj. No.: 52/98

GSM/CSS R9 will be Ericsson's GSM delivery for the year 2001, containing development of the traditional GSM customers, satellite operators, GSM-Railway and most likely first parts of the 3rd generation system UMTS.

As TPM R9 you will be responsible for the GSM switching system development project from pre-study until general availability. This covers the relevant node-level projects (e.g. MCS/VLR, GDB, SOG/BGW) as well as ordering responsibility from our associated projects from e.g. AMC and UAB. The project will conclude at GA after INDUS and FOA activities on our various markets. The project volume is expected to be in the magnitude of ca. 600 - 800 kmh, excluding associated projects.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/RTC  
Thomas Funke  
EED.EEDTFU  
+49 2407 575 546

EED/X/RC  
Abbas Sabokbar  
EED.EEDSAAB  
+49 2407 575 135

### Project Manager R9 MSC/VLR

Proj. No.: 54/98

You will be responsible for the MSC/VLR project from TGI (feasibility study) up to MS 10 (system release). The MSC/VLR project will be the biggest node level project belonging to CSS/GSM R9. The project volume is expected to be in the magnitude of ca. 200 - 300 kmh (excluding associated projects).

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/RTC  
Thomas Funke  
EED.EEDTFU  
+49 2407 575 546

EED/X/RC  
Abbas Sabokbar  
EED.EEDSAAB  
+49 2407 575 135

### STE Test Engineer

Project-No: 9/298

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 AMC 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.

Please contact:  
Human Resources  
Thomas Kommer  
EED.EEDTKO  
+49 2407 575 7828

EED/X/SOQC  
Jan Lindquist  
EED.EEDJLI  
+49 2407 575 460

The „INDUSTrialization“ section of the Test & Support department assumes the responsibility for the new and challenging GSM-R (GSM-Railway) which is a solution for railways using the IN-applications of the GSM-network. It will enable railway companies to operate all their different communications on a single, future-proof platform.

We need to strengthen our team and offer the following vacancies:

### Group Manager „End User Service INDUS“

Proj.-No. 40/98

This group provides coordination and execution of Source System Test activities and trouble shooting. Other areas of responsibility are defined within Basic Call Handling, Supplementary & Data Services and Intelligent Networks (IN).

The main tasks are ...  
- Participating in project planning and follow-up;  
- Performing technical leadership and steering the group;  
- Supporting the group members with competence development, appraisals and recruitment;

You ...  
- like to aim for this untypical type of leadership;  
- have some experience in System Test or INDUSTRIalization activities;  
- have a strong interest in people;  
- have some first experience in managing a group/team.

Join our challenging team to work on the future of one of the most interesting new GSM applications!

Please contact:  
Simon Seebass  
Human Resources  
EED.EEDSIMS  
+49 2407 575 163

EED/X/STC  
Klaus Boeckers  
EED.EEDKLB  
+49 2407 575 181

### TCM Project Manager -

CME 20 SS R8 INDUS

Proj. No.: 19/398

The R8 project will provide digital switching solutions for three customer segments: satellite operators, GSM-R (GSM for railway) and traditional GSM operators. The project consists of elements from CSS (MSC/VLR), AMC, GPRS (SGSN and GGSN) and GDB (SOG, BGW, AUC, EIR and HLR).

You will work in a leading position within the Product Line Configuration Management Section, a motivated and experienced team of 38 people responsible for all activities required to execute TCM projects. The TCM organisation is responsible for integration of products designed within three related design projects executed by the AMC, CSS and PA-SC organisations. The main tasks are planning, execution and control of TCM activities for the verification testing conducted at EED. You will also coordinate TCM activities at distributed locations (three ASOs and one stand-alone FSC). TCM's activities include program production, AS specification, parameter administration, library specification, data transcript design, dump assembly and MHO administration.

A good candidate has competence in the area of AXE design, testing or TCM. Previous experience in project or line management and a good understanding of TCM and verification/INDUS processes is desirable. A good understanding of PROPS methodology is a plus. As project manager you will be coordinating closely with the INDUS project management.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/SOC  
Dan Grinstead  
EED.EEDGR  
+49 2407 575 341

The CSS Design department is a typical design centre within the GSM development area of the Ericsson family. The development projects are targeted towards the European and American systems with a close coordination to a number of design offices worldwide.

We need to strengthen our team in this challenging new organizational structure which provides a high flexibility for future tasks and are looking for a:

### Competence Manager as part of the management team of the Design department

Proj.-No. 12/398

Due to the new structure you as the competence manager have the possibility to build up the role model. Your ideas and expectations are determining the future of this position.

Your tasks are ...  
- Participating in and working on the decisions of the management team;  
- Being responsible for the career development of 25-30 people;  
- Working in close cooperation with the project team concerning planning and preparing resources;  
- Providing 'your' people with appraisals, recruitment and administrative work;

You ...  
- need a strong interest in human beings to act as service function;  
- have some first leadership experience (project/line/team);  
- are strong in social skills;  
- have new ideas and are able to introduce them;

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/PC  
Arthur Slipean  
EED.EEDARS  
+49 2407 575 141

### GLOBAL Support for the No.1 AXE application.

Experienced Troubleshooters

Proj.-No.: 39/98

IN Specialists

Proj.-No.: 17/398

Tester (modification handling)

Proj.-No.: 18/398

The „Product Line Maintenance“ section takes central responsibility for the Worldwide CME20 Switching Systems and is considered as the primary competence centre for CME20 SS

We ...  
- work closely with all worldwide CME20 Support, Test and Design organizations and with the most demanding customers.

... provide Modification Handling and full Technical Support across all CME20 Switching System functionality at network, system and functional level.

... provide solutions for high impact problems in AXE functionality.

Our strong resources reflect our responsibility for troubleshooting and testing. Opportunities for travel, networking, personal and technical development are outstanding. Watch yourself make a global impact with your efforts.

**JOB DEFINITION:**  
We are looking for you, if you want to maintain your solid reputation in the following areas:

- Experienced Troubleshooters, with an in-depth AXE knowledge and a strong focus on our customers concerns Proj.-No.: 39/98
- IN Specialists (SDP, Service Scripts, SMAS) Proj.-No.: 17/398
- Modification Handling Experts for verification of solutions in all system parts (Tester) Proj.-No.: 18/398

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/X/SLC  
Thomas Busch  
EED.EEDTB  
+49 2407 575 178

## General Packet Radio Service (GPRS)

The System House GPRS (General Packet Radio Services) is responsible for the development of products in the field of GPRS and Telecommunications Management (TMOS).

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.

The unit Product & Operations (D/P) just recently got the assignment to build up the Central Configuration Management (CCM) for Ericsson's GPRS products.

We are looking for:

### Configuration Manager General Packet Radio Service

Proj.-No. 4898

who will enable us to secure, enhance and extend our current configuration management activities in the areas of:

- Development Environment (ClearCase, imake)
- Software/System Builds
- Integration of PRIM/GASK/Trouble Reporting Tools
- Trouble Report Handling (Introduction of ClearDDTS)

As a technical CM you need a good understanding of software version control, UNIX and Make-file systems. Knowledge of ClearCase and/or imake is an asset.

You need to bring initiative, very good communication and cooperation skills as well as a good ability to work under pressure.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 02407 575 163

EED/D/PC  
Stefan Eissing  
EED.EEDSTE  
+49 02407 575 159

### Senior System Designer General Packet Radio Service

Proj.-No. 6998

We are looking for Senior System Designers who will enable us to enhance and extend our current GPRS Phase 2/UMTS standardization activities and system design of the GPRS Support Nodes (SGSN and GGSN). This task comprises:

- support for Ericsson's ETSI delegates within the Ericsson-wide standardization projects and active participation in ETSI as an Ericsson representative
- analysis of ETSI change requests
- support and influence of the design project with respect to the latest developments in ETSI
- support of internal customers and local product management
- investigation of the current development in IETF in order to actively influence the development in UMTS at an early stage

As a senior system designer you need a proven, solid background in the technical principles of GSM. Of special importance for this position is a good understanding of the GSM circuit switched data services and preferably also Direct Access and GPRS. Experience with typical datacom protocols such as IP, TCP/UDP, HTTP, PPP, DHCP, RADIUS, RSVP, etc. would be beneficial. Since this task requires extensive contacts to

Ericsson internal personnel and to external customers and competitors, you need very good communication and negotiation skills as well as a good command of the English language. An already well established personal Ericsson network will support you to fulfil this challenging task.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

EED/D/PC  
Stefan Eissing  
EED.EEDSTE  
+49 2407 575 159

### GPRS Senior Software Designers

Proj.-No.: 16897

The main tasks for the position are: either design of the GPRS bearer service (SMS, VLR, class A/B mobile support) or O&M product development (OMS,PXM).

The job is performed in teams with a large degree of responsibility and authority, comprising all parts of the product life cycle from early requirement analysis up to maintenance after GA. There will be a close cooperation with the I&V subproject at EED. Thus, we have the opportunity to see our products being integrated and verified in the real GSM datacom network.

As the GPRS organization is still rather young, there is the freedom to be pioneer for processes, system architecture, usage of programming languages and platforms. On the other hand, we have well defined projects and clear delivery deadlines for our assignments.

For the GPRS bearer service, the languages ERLANG, C and JAVA are used. O&M applies C++, JAVA, ERLANG and the CORBA architecture.

We are looking for persons with proven experience in the technical domain and a strong team orientation. A solid SW engineering background is a requirement. Either local or expat contracts can be offered for these positions.

Please contact:  
Human Resources  
Simon Seebass  
EED.EEDSIMS  
+49 2407 575 163

GPRS Design Manager  
Andreas Daun  
EED.EEDAND  
+49 2407 575 163

## Location Hildesheim

The EED/D department at location Hildesheim



The Ericsson Stadium provides a great deal of free advertising via televised sports, not only in New Zealand, but also in Australia to a great extent. Ericsson has the privilege of bringing customers or employees to the arena as guests. Ericsson has even held some internal meetings in its corporate box with an excellent view of the playing field. Photo: Patrik Lindén

## Ericsson's own arena

In 1994, Ericsson Stadium was inaugurated in Auckland in northern New Zealand. It has helped make Ericsson a familiar name among New Zealanders.

**B**rand awareness and image are extremely important to Ericsson New Zealand's business. They support sales in consumer markets and contribute to the Wanted Position 2000 objectives of being perceived as a responsible corporate citizen.

"Sponsoring an arena helps keep Ericsson in the public eye, even between our large campaigns," explains Stephen Inglis, who is responsible for Ericsson New Zealand's marketing communications.

Although the arena is mostly used for

rugby, which is a major sport in New Zealand, it is also used for concerts. Both Michael Jackson and Tina Turner have performed at Ericsson Stadium.

Ericsson Stadium is the home arena of the BT Warriors, New Zealand's first professional rugby team.

This means many matches against Australian teams, which also gives Ericsson a lot of television publicity in Australia. Ericsson is one of several sponsors of the BT Warriors.

The arena has helped keep the brand

name alive. Eighty-eight percent of New Zealanders recognize Ericsson. Although this is primarily due to mobile phones, the second factor people name is the arena. The factor in third place is telecom in general.

There is another Ericsson Stadium in Charlotte, North Carolina, in the U.S. However, people in Auckland are quick to point out that Auckland was first.

Patrik Lindén

patrik.linden@lme.ericsson.se

### UPCOMING

**Sept:** Ericsson road show in Asia to display the third-generation mobile telephone system. Start in Australia.

**Sept. 15-17:** Intelcom '98 telecom fair in London.

**Sept. 15-18:** Taipei Telecom trade show in Taiwan.

### UPDATE

**Aug. 27:** Ericsson in the U.S. received an award for good corporate citizenship from the PCIA Foundation. The prize was awarded by PCIA and Wireless Week magazine. Ericsson was commended for its Women's Technical Career Day.

**Sept. 9:** The final in the Ericsson-sponsored Golden League championships in track and field were held in Moscow.

**Sept. 9:** Willy, the killer whale from the movie "Free Willy" was released in the ocean off the coast of Iceland. Ericsson sponsored the Web casting of the event. <http://www.keiko.org>

### NEW ASSIGNMENTS

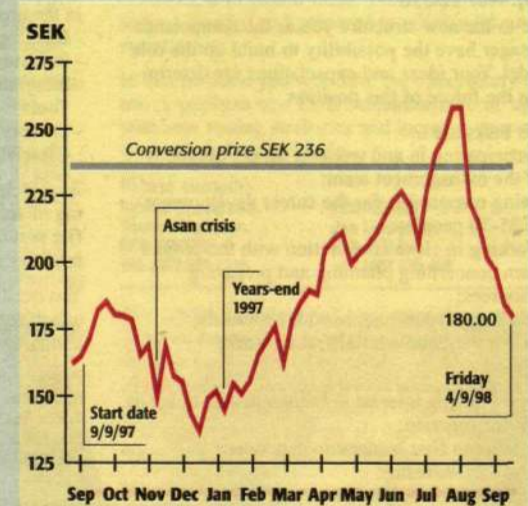
**Walo von Greyers** has been appointed head of the corporate support unit, Trademarks & Designs.

**Michael Kühner** has been appointed head of Ericsson's company in Panama. He was previously employed at Ericsson in Columbia. In Panama, he will succeed Lars Birging, who will return to Ericsson in Sweden.

**Veiko Sepp** has been appointed head of Ericsson in Estonia. Veiko was previously marketing manager in the same company.

**Jorma Mobrén** will take over as Acting Senior Vice President of Corporate Technology after Håkan Jansson's resignation from Ericsson, which was announced in the previous issue of Contact.

### THE ERICSSON B SHARE



On September 9, 1997, an extraordinary meeting of stockholders approved a proposal to issue convertible debentures to Ericsson employees. The conversion period extends through June 30, 2003. For more info, see: <http://inside.ericsson.se/converti.htm>

