R380 a hit at Comdex

Ericsson had a successful premiere at the Comdex trade show in Las Vegas, where the new R380 World phone was unveiled. Kurt Hellström was one of the main speakers. 4

Ericsson leads 3G race

According to a market analyst report from Lehman Brothers, Ericsson holds a unique position in the 3G arena. One prerequisite for success is that Ericsson can offer a complete solution. 6

Strategy supplement

This issue of Contact contains a strategy supplement. It describes the direction in which Ericsson is headed, and important factors for the company's succes.

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■ NO. 19 · OCTOBER 30 2000

Patrik Andersson, Julia Shcheslavskaya and Marian Bezak work for the Direct Markets unit at the Mobile Systems Division. They enjoy their work, which allows them to have direct contact with customers and to take initiative. Photo: Eduardo Valenzuela

Breaking new ground

For the Direct Markets unit, no market is too small to be of interest. Several of Ericsson's major GSM markets can trace their roots to this unit. It is currently working with 150 clients in order to secure new contracts, several of which are in countries with different cultures, compared with the West. This year, Saudi Arabia is the largest direct market. 16–17

Share program for employees

The Board of Directors is planning to offer new share and options programs in order to attract and retain employees. The plan is to offer all employees a chance to invest in Ericsson shares. A new options program is also being considered for certain key employees. It is hoped that the programs can be launched sometime next year. News, 4

15 billion SMS a month

SMS usage is growing explosively. By the end of the year, 15 billion text messages will be transmitted each month. That corresponds to almost 6,000 messages a second. Increasingly, people are turning to SMS as a shortcut to the mobile Internet. World Watch 10–11

Photo: Ecke Küller

■ AT WORK

In just a short period of time, e-mail has changed the way we work. Today the model is fast, simple and flexible. But for many, e-mail has become just another stressful part of the job. People are being overwhelmed by information. Perhaps clear rules are needed to address how we deal with e-mail. 29

■ MARKET REPORT

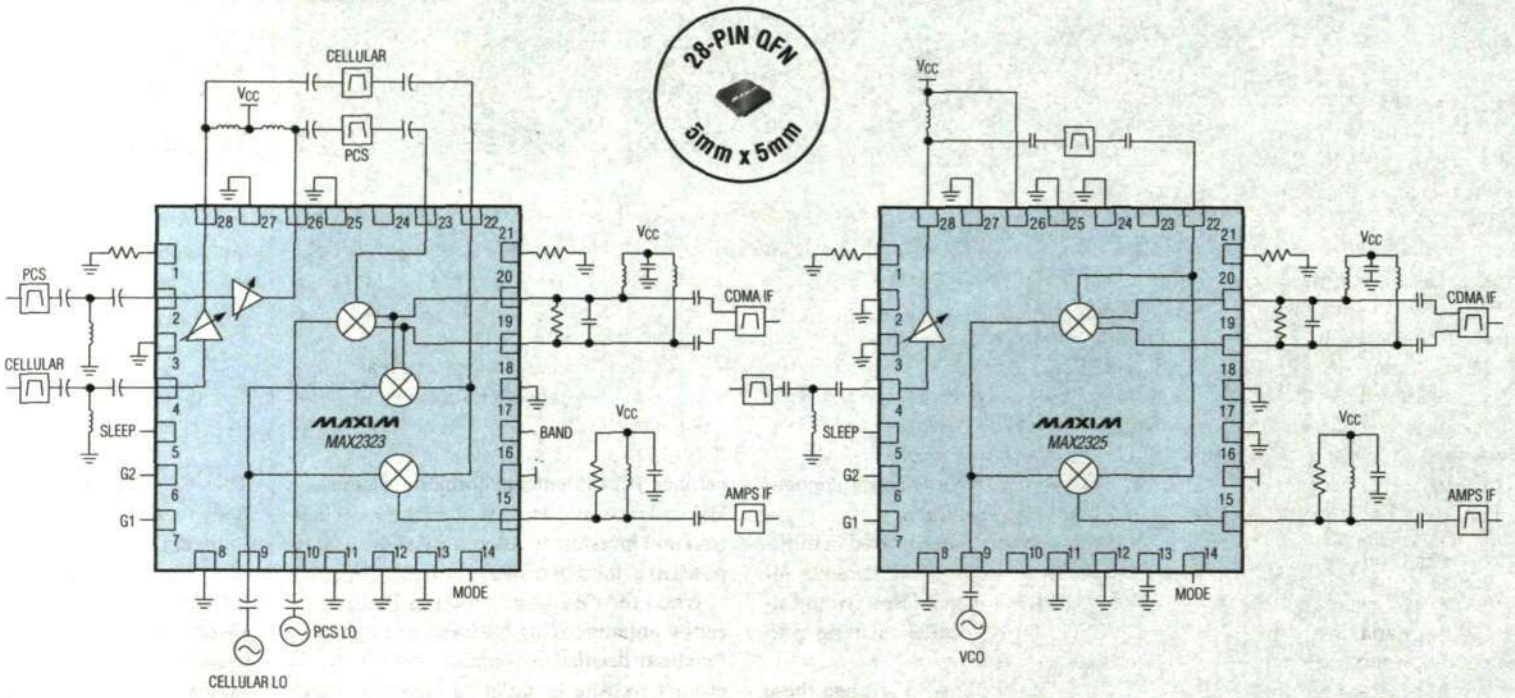
Last year, Ericsson in Mexico saw its sales increase by 70 percent. This year, an increase of around 100 percent is anticipated. Mexico's economy is booming. The recent election and deregulation of the telecom industry have had a major impact on developments in the country. 20–22

WORLD'S SMALLEST DUAL-BAND CELL PHONE LNA + MIXER IC HAS HIGHEST IP3

SiGe IC in 5mm x 5mm QFN Package Sets New Industry Standard

The MAX2323 low-noise amplifier (LNA) plus mixer is designed for dual-band CDMA cellular phones and can also be used in dual-band TDMA, GSM, or EDGE cellular phones. It includes all circuitry needed from the antenna to the IF filter in a miniature QFN package. The LNAs have unprecedented input IP3 and the mixers have very high gain, which is essential to meet sensitivity goals. Both LNAs have switched gain states to conserve power and increase dynamic range. The low-band LNA has three gain states for optimum IP3 margin in CDMA systems. The MAX2323 addresses dual-band, tri-mode applications, and the MAX2325 is a pin-compatible cellular-band version.

- **Over 26dB Overall Gain**
- **<2.6dB Cascade PCS Noise Figure (Includes 3dB Interstage Filter Loss)**
- **Ultra-Small 28-Pin MLF2 Package**
- **Multiple Power-Saving Modes, Including a 17mA Paging Mode**
- **Switchable LNA Gain**
- **>+10dBm LNA IIP3 Adjustable to >+13dBm IIP3**



Very high input IP3 and the industry's smallest package make the MAX2323 unique.

The cellular-band only MAX2325 is pin compatible with the MAX2323.

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Meetings for market watchers

This year, the telecom market has been a real roller coaster ride. Since shareholders have made almost daily transfers, the employees at Ericsson Investor Relations (IR) have had a very heavy workload the past few months.

Maria Bernström and Lotta Wiklund are the two most recent additions to Ericsson Investor Relations.

➤ "Analysts and investors would like to have the ability to more easily identify the factors that have an effect on the size of the market and the future earnings within our industry," says Gary Pinkham, head of Investor Relations at Ericsson.

Gary Pinkham has been working hard in recent months to satisfy the enormous demand for information that investors and financial analysts have expressed.

Pinkham, who works in New York, is currently overseeing a group of eight specialists in Stockholm and New York. An office was also recently opened in London.

Gary Pinkham

"We opened our third IR office in London when we noticed that more and more banks and brokers were starting to follow Ericsson and provide their customers with investment advice," says Gary Pinkham.

Lotta Wiklund was named IR Manager in London and given the task of focusing on London's "Square Mile," as the city's financial center is known. Lotta Wiklund's office is located in Ericsson's regional office by St. James' Square. Her colleagues include Sandra Mielo in New York and Helene Rickeby, Gunilla Brunnberg Börtas, Marianne Hellqvist and Rose-Marie Johansson in Stockholm.

Lotta Wiklund came to Ericsson from City University Business School in London with a master's degree in finance and previous work experience from Ericsson.

Demand for dialog being met

Last week, Gary Pinkham acknowledged that the group will be adding Maria Bernström, who will oversee IR in Sweden and continental Europe. Maria Bernström received her business administration degree from the University of Stockholm and has worked at Ericsson since 1985.

Prior to that, she worked at Price Waterhouse as an auditor. At Ericsson, she has held several different assignments as a financial and business controller in Sweden and the US.

"Since telecom companies have taken on a central role in financial markets, we would like to expand our IR group to accommodate the ever increasing demands for dialog," says Sten Fornell, Executive Vice President and Chief Financial Officer.

Ericsson, like other similar companies, wants the market to have the right impression of the company in order to be able to make a correct evaluation.

Quarterly and annual reports are available for this purpose. It is also important to be timely and forthcoming when informing about a company's ongoing business, strategic decisions such as divestments and acquisitions and, of course, updates about changes throughout the business climate.

And yet, for many of those involved in the financial markets, this is still not enough. Almost every bank that tracks Ericsson would also like to have an individual meeting with company management.

"We have to do our best to arrange these meetings, but it is next to impossible to satisfy everyone since, at any given moment, we have thirty or more requests," says Gary Pinkham.

At Ericsson's quarterly conferences, some 450 analysts and investors are usually in attendance. Even if they are given the opportunity to pump Kurt Hellström and Sten Fornell for information about the company's plans and forecasts for the next period, it is still inadequate for many.

"Many of our customers would like to be able to sit and talk with our leaders in order to better immerse themselves in our operations. Others want to be further enlightened on technological trends, market forecasts or specialized areas within our industry," says Pinkham.

Roughly 300 analysts and investors have been in contact with Ericsson's leadership over the past four weeks. This was the reason that the IR managers are planning to hold special "theme" meetings aimed at larger audiences.

During a meeting in London at the end of November, Jan Uddenfeldt, Torbjörn Nilsson and Håkan Eriksson met with more than 100 analysts and investors to discuss Ericsson's leading position in third-generation technology.

When the Consumer Products Division recently announced its business strategy, Gary Pinkham decided to publish this on the IR group's website in order to create as much openness as possible.

One step ahead

Since many investors want to stay one step ahead by doing a better job analyzing the company's future prospects, the IR group has to follow every meeting carefully. According to Gary Pinkham, the company has instituted very clear rules that must be followed to the letter.

"We treat all shareholders equally. We have to be able to guarantee similar rules for everyone," he says.

This is not only because stock trading rules around the globe require that sensitive pricing information be disseminated to everyone simultaneously. Companies like Ericsson, which play an important role on markets around the world, have to be able to guarantee their credibility, which also explains the relationship to shareholders.

Investigate rumors

This is why the IR group, along with the company's legal department, is very careful about immediately investigating rumors that have leaked to the market.

"Even if many of the rumors are unfounded, we take all indications seriously. In an industry as sensitive as ours, we have to be extremely fast so that affected market players can quickly receive a reliable statement from the company," says Gary Pinkham.

Oftentimes, these sorts of rumors are reviewed by market advisors on the OM Stockholm exchange or the NASDAQ exchange in New York, in order to decide what sort of actions need to be taken. The best insurance against surprises is to provide a fair picture of the company. Gary Pinkham's goal is that the company's three IR offices be able to offer services at the very highest level.

Lars-Göran Hedin

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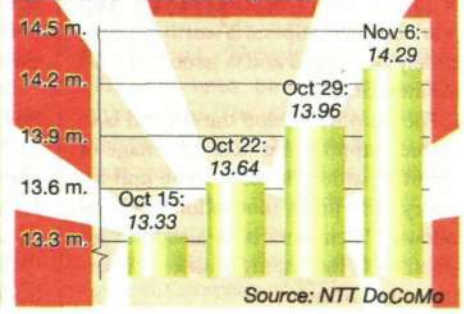
DID YOU KNOW THAT...

...i-mode is growing rapidly

Japanese operator NTT DoCoMo's service for mobile Internet, i-mode, has since its start in February 1999 received 4 million subscribers. Below is the rate of increase during the period October 15 – November 5, 2000.



Source: NTT DoCoMo

Mobile Internet in cars with GPRS

>> Ericsson and Italy's ViaSat have signed a joint venture agreement to develop various mobile Internet services in automobiles using GPRS.

The first vehicle-adapted GPRS system in Italy provides connection speeds four times faster than we have today.

"Ericsson expects that the number of mobile Internet users will exceed the number of landline subscribers within three years. Motorists will play an important role in that development," says Jan Lindgren, Vice President and general manager of Mobile Internet Solutions.

New order for DiRECT

>> Ericsson Saab Avionics has received a new order from the Defense Material Administration for its digital registration system DiRECT. The order, worth USD 6.3 million, is scheduled for delivery between 2003–2005.

The system will be installed in 20 Gripen series-2 fighter planes. Using DiRECT, information from the aircraft's various component systems, such as radar and its forward facing video camera, is used to evaluate the flight route as well as for training purposes.

Ericsson supplies GSM to Java

>> Ericsson has signed a contract with the Indonesian operator Natrindo to deliver a GSM 1,800 network to the Eastern Java region in Indonesia. Within the framework of the contract, there is also an option to upgrade the network to GPRS. The network will be launched during the first quarter of 2001.

Ericsson will also provide assistance with network integration and support for the construction of systems for payment and prepaid subscriptions.

The contract is worth over USD 16 million. Natrindo is a subsidiary of Across-Asia Multimedia.

ENGINE ready for Germany

>> The German broadband operator Callino will buy Ericsson's ENGINE solution in order to upgrade its data network. Initially, ten AXD 301's will be put into operation.

Four of them will be used as access switches. During phase two, an additional five facilities are planned.

Work on Ericsson recognized

>> A plan of action for how Ericsson should go about marketing PrePaid cash cards in Asia has been awarded this year's business stipend. Five students at IHM Business School in Stockholm worked out a marketing plan on behalf of Ericsson Software Technology. This year's business stipend is worth approximately USD 2,500 and is issued by IHM Business School.

The purpose behind the stipend is to spread, support and take advantage of expertise within Swedish trade and industry. The jury's motivation reads as follows: "Their work is an insightful solution to an interesting business opportunity for Ericsson."

Plans for employee shareholding program

The board of directors is investigating the possibility of implementing a shareholding program that would include all Ericsson employees, worldwide.

In addition, a new options program is being planned for key individuals within the company.

The shareholding program will be implemented starting next year. The reason for doing so is the increasingly stiff competition for skilled workers.

Through the shareholding program, employees will be able to allocate a portion of their salaries to purchase Ericsson B shares. The plan calls for the company to contribute an equal number of shares if they are retained for a certain amount of time.

A similar program has previously been implemented by Ericsson in the UK with great success – 75 percent of employees joined the program.

"The details have yet to be worked out, so I can't say right now what kind of requirements there will be," says Nina Macpherson, Ericsson's corporate attorney and project manager for the program.

"Moreover, the requirements might differ between various countries, depending on local legislation," she says.

The Board of Directors is also considering a new options program that would be offered to key individuals within the company.

Attract employees

Approximately 8,000 Ericsson employees, most of them in the US, are covered by existing options programs. Options, which are issued for free, give employees the right to buy shares at a predetermined price.

"Ericsson's objective is both to retain the employees we have, as well as to attract new employees," says Nina Macpherson.

Ericsson has previously offered various kinds of programs aimed at offering Ericsson employees a chance to own shares in the company. A convertibles program was, for example, offered in 1997.

Proposal ready in December

"It was very popular in Sweden. Interest overseas varied, largely depending on how well people understood the plan as well as whether banks in the respective countries were willing to offer our employees loans. With the shareholding program, we hope to reach out to more employees overseas," says Nina Macpherson.

At a board meeting on December 21, the Board of Directors will take a position on a proposal for how to formulate the options and shareholding programs.

Their proposal must then be approved by shareholders at the Annual General Meeting at the end of March, before an offer can be made to employees later in the year.

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FACTS/**OPTIONS**

- A stock option is a security that provides the holder the right to buy a fixed number of shares at a predetermined price. If the share increases in value, a gain can be made.
- Options programs for key employees are fairly common within the industry and are considered to be a good way to motivate those affected to work hard to ensure that shares increase in value, as well as providing an incentive for personnel to remain with the company. Employee options are usually valid only as long as you are employed.

Equality award goes to Ericsson in Croatia

Many women in management and a good program to recruit more.

These two factors made Ericsson in Croatia the overwhelming winner of the equality award.

Collaboration with the local university, managerial planning and various development programs are examples of the local company's efforts.

Women already comprise one-fourth of the management group at Ericsson in Croatia. Ana Jozinec, head of personnel issues at the company, is one of the driving forces behind the equality measures that have been taken.

"The local company is working methodically to seek out top female talent. The women who are considered to have potential are thoroughly supported for further development. Ericsson in Croatia has also put its female managers into the media spotlight, something that more local companies should do," suggests Susanne Ihre, chairperson of the Ericsson European Equality Award (EEEA) jury.

Four finalists – Croatia, Ukraine, Ireland and Denmark – were selected from ten proposed.

This was the second year that Ericsson handed out the Ericsson European Equality Award.

Included among jury members are market area head of Western Europe, Ragnar Bäck, and information director Roland Klein.

The award is one way to highlight good examples within the company. Last year, Ericsson Microwave Systems in Gothenburg won the award for its collaboration with Chalmers University of Technology, where young female technicians have the opportunity to participate in mentoring programs.

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Ericsson European Equality Award goes to Ericsson in Croatia. Artist Ulrika Hydman-Vallien is the designer of the trophy.

http://inside.ericsson.se/human_resources/eeea.htm

www.ericsson.se/careers/eeea

Hellström reitrates focus on mobility

Ericsson should lead the way in the development of mobile Internet. That was Kurt Hellström's unequivocal message when he addressed the Comdex trade show, in Las Vegas.

He also explained why:

"Why are we dedicated to mobility? Because it makes it easier for us to communicate. Mobility offers personal freedom. This has already been picked up by consumers all ower the world."

Ericsson made a grand debut and was a big hit at the Comdex trade show last week, with its launch of the R380 World and Kurt Hellström as one of the main speakers.

Comdex is the world's largest IT trade show. In the past, it revolved largely around personal computers. As a result, it has come to be completely dominated by companies such as Microsoft, Intel and Hewlett-Packard.

But since mobile Internet is this year's big trend, the telecom industry is now also making inroads into the trade show, with Ericsson in the lead.

Kurt Hellström's presence at Comdex was an important symbol for what is occurring within the telecom industry today.

The boundaries between Internet and telecom are combining to form a single entity.

Ericsson wanted to demonstrate that its goal is to play a leading role in the development of the mobile Internet.

In his speech, Kurt Hellström emphasized that he was there to explain why Ericsson believes so strongly in mobility and has devoted the past 20 years to that end:

Kurt Hellström

"Back when we seriously started focusing on mobility in the 1980s, analysts predicted that there would be one million mobile phone users by year 2000. Today, we can see that they were more than 600 times wrong. Every day the number of mobile phone subscriptions increases by 700,000. Of these, 250,000 will be connected through Ericsson's networks. And that is a figure that I am proud of."

Some 2,300 companies were on hand, vying for the attention of trade show visitors. Ericsson's R380 World aroused a great deal of attention, both from trade show visitors and by the media.

The phone can be used in more than 120 countries on all continents.

The R380 is the first telephone to fully combine a personal digital assistant with the advantages of a mobile phone and mobile Internet services.

"Mobile communication is all about providing users with a personal tool that offers instant access to communication anywhere, anytime ," says Kurt Hellström.

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Consumer division reinforces management

The Consumer Products Division is making a major effort to reach its goal of returning to profitability next year. By adding three new executives, it hopes to strengthen its management team.

Jan Wäreby, head of the division, emphasizes that every employee will have to do their part in order to regain a leading position on the terminal side.

Time, quality and costs were three important buzzwords that Jan Wäreby, Executive Vice President, Consumer Products division, used for informational meetings on November 14 and 15.

"Like our competitors, we've become used to exceeding predictions for phone sales in recent years," said Jan Wäreby.

Shift in trend

"Six months ago, the trend was broken. One explanation is that the replacement market was not as strong as the industry had predicted," said Jan Wäreby.

In addition to a component shortage, production capacity had been increased to meet increasing demand. Instead of continued rapid growth, the market has now returned to a more balanced situation. Jan Ahrenbring, in charge of branding for Consumer Products, is pleased with the three new recruits. He hops that they, together with a new strategy, will help return the consumer division to profitability within a year.

Three key areas

"Market developments, industrial design and purchasing are three extremely important areas in our industry," explains Jan Ahrenbring.

Nikolaus Frank will be joining the company in two months to oversee industrial design at the division.

He has 13 years of experience in electronics and mobile related design. Responsibility for purchasing will be assumed by Anders Franzén. He has considerable experience of global purchasing operations from internationl companies, and he will begin on December 1.

Philip Vanhoutte will be assuming responsibility for strategic market development. Most recently, he worked as a marketing and sales manager at MCI Worldcom International.

"Philip Vanhoutte will be involved with comprehensive strategies for the division" says Jan Ahrenbring.

Jan Wäreby and Jan Ahrenbring are fighting to reach the profitabolity goal. Photo: Lars Åström

When it comes to supplying new phone models in a timely fashion, the T20 is a good example of how the division can hasten delivery times considerably. Just one and a half weeks after launch, the phone was commercially available.

An important part of the measures being taken include focusing the product portfolio and on primarily developing phones for GSM and UMTS.

When it comes to TDMA and CDMA phones, the product line will focus exclusively on Ericsson's systems customers and their markets.

During the employee gatherings, Jan Wäreby emphasized the need for more collaboration on a global basis with Ericsson's Key Account Managers on the systems side. A very large portion of phone sales are influenced by mobile phone operators, which is why it is so important to have a dialog with the operators.

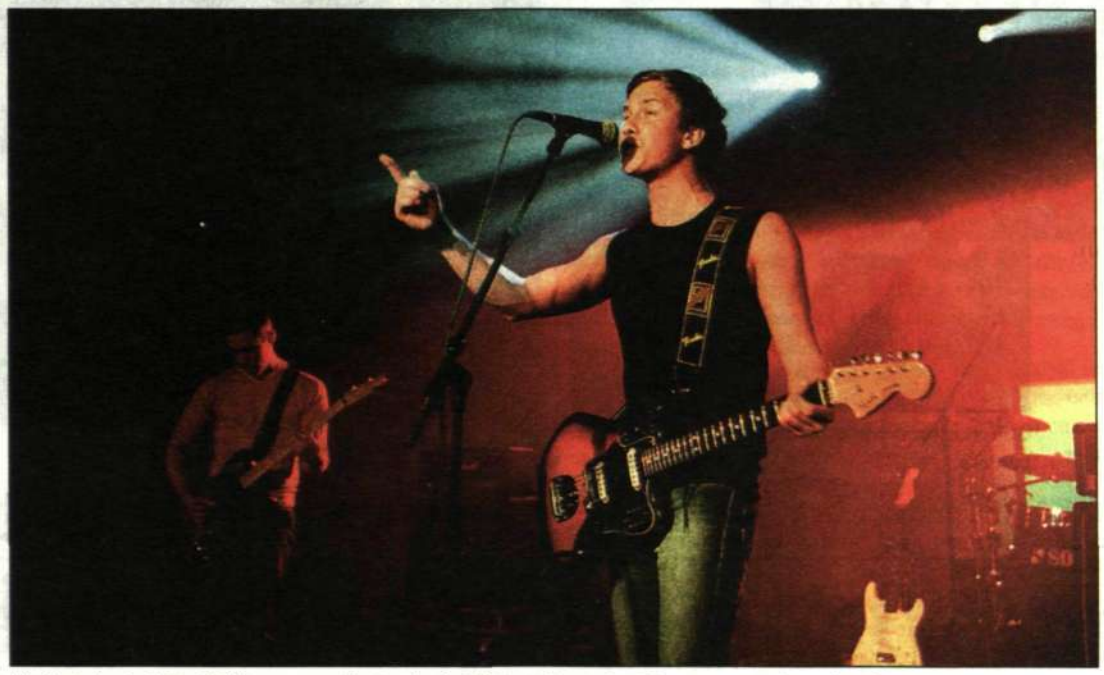
These measures, according to Jan Wäreby, will lead to a brighter future.

"Our goal is to have resolved our operational problems by next year."

Ulrika Nybäck
Gunilla Tamm

David makes himself heard

David Nilsson, aged 20, from Höganäs, Sweden, is a young musician with a promising future. After an exciting final, David was awarded first prize in Ericsson's Make Yourself Heard contest.



Highly talented David Nilsson won first prize in Ericsson's contest for young unsigned artists.

The jury, which consisted of a number of well-known musicians and other representatives of the music industry, included rock artist Joey Tempest, producer Max Martin and singer Robyn.

David was all smiles when he accepted the award. When David and the four other band members played the winning number – "That will be the day" – they received roaring ovations from the audience.

Powerful pop

All five finalists made very strong appearances at the event, which was held at Kulturhuset in Stockholm and witnessed by a host of music industry and Ericsson representatives, as well as other music lovers and journalists.

The songs spanned the music spectrum, ranging from Until, a boy band, to singer/songwriter Elin with her red guitar. And of course, David, whose powerful pop blended with heavy guitars was most appreciated by the jury.

"It's always difficult to judge music, but the jury was unanimous in choosing David as the winner," says Joey Tempest, formerly lead singer in Europe, a highly successful rock group.

David himself was not so convinced that he would win.

"The other artists were good in their own right."

Good for the carreer

A law student, David played in his first band at the age of ten.

"In all of my bands, I've always been the one who took the greatest interest. I'm a student now, but I've had a gut feeling that something would happen in my music career. I want to focus 100 percent on my music, not wait until I'm 30 and realize that it's too late," says David.

The Make Yourself Heard Award will give him a chance to achieve his dream, since the prize includes the production of a CD and a music video, as well as a tour of clubs.

"This is a great start. Now, I have a chance to find out what the industry involves. Then I need to find a record company. I actually spoke to one earlier today," David adds.

There is no doubt that this talent contest could be the ticket to a music career, particularly in view of the large number of highly experienced "industry ears" in the audience.

Mattias Schedvin, marketing manager at Ericsson and responsible for the contest, was also satisfied with the event.

"The contest has really given me the taste for more, so we've decided to arrange another one next year," says Mattias Schedvin.

Henrika Lavonius-Norén
freelance journalist

Secure sites for 3G rollout

»» Ericsson has reached an agreement with the American firm SpectraSite. The contract can be seen as part of Ericsson's strategy to secure a leading position within 3G and its continuing efforts to outsource everything that is not part of the company's core operations.

Ericsson will gain access to the many sites that SpectraSite has on towers, building rooftops and the ground.

SpectraSite is financing construction, and will also own all of the sites that will be put into operation within the framework of this agreement.

SpectraSite is a world leader in its field, and has over 50,000 websites worldwide.

BroadVision added to WISE

»» Ericsson and BroadVision have reached an agreement that will result in BroadVision's application software becoming a part of Ericsson's WISE portal.

WISE is a packet-based solution for mobile phone operators. It helps operators to quickly add mobile Internet services.

The new contract gives mobile operators the opportunity to offer customers customized services depending on where they are located, how much time they have available and the customer's personal profile.

BroadVision is a leader among customized applications for e-commerce, and its applications are available in more than 120 countries.

Neil Armstrong advocate for 3G

»» Former astronaut Neil Armstrong, provided introductory and concluding remarks at an informational gathering, the 3G Summit, which Ericsson in Turkey organized on November 15.

Neil Armstrong

Over 800 people were in attendance to hear about the possibilities that 3G will offer.

"In addition to our customers, we invited representatives from ministries and various government authorities, including the telecommunications authority that issues licenses," says Sören Ahlstedt, Vice President at Ericsson in Turkey.

"There is a fair amount of skepticism surrounding 3G, including financing difficulties and insufficient start-up time. In order to demonstrate that an allegedly 'impossible' project can be quite successful, we brought in Neil Armstrong," says Sören Ahlstedt.

Third-generation licenses for Turkey will be issued at the end of next year.

Ethics award goes to Hungary

»» Ericsson's Hungarian subsidiary, ETH, has been awarded a business ethics award. The award was given by Budapest Klub, whose goal it is to promote ethical thought and responsibility, in areas such as the environment and workplace conditions.

Two other companies were also recognized, Compaq and TVK.

Ericsson at the front in 3G-race

Market analysts at Lehman Brothers have deemed Ericsson with its breadth to have one of the best 3G offerings in the world, as stated in a report that summarizes the outlook for the third-generation mobile telecom market.

The 80-page report, entitled "Wireless Equipment Review," addresses how the 3G market affects telecom suppliers and operators worldwide, and how these companies are equipped to handle the technology shift. According to the report, one of the prerequisites for a 3G success is that GPRS services become popular.

Lehman Brothers lists a number of criteria that will determine the success of telecom suppliers after the technology shift.

The ability to offer total solutions – everything from business models and systems solutions to technical support and terminals – is of prime importance.

Also important is a broad customer base for GSM and GPRS, in addition to the ability to assist operators in the transition from all mobile standards to 3G. In this respect, Ericsson has an edge, with a leading position in the GSM and GPRS markets.

The production of large volumes, particularly of radio systems, will become increasingly important in order to maintain favorable profit margins.

Profitability will play a significant role as telecom companies are forced to invest a greater portion of their resources in research and development, according to the Lehman Brothers report.

Ulrika Nybäck
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An Ericsson prototype of a 3G terminal.

First Internet Data Center opened

Recently Ericsson's first Internet Data Center (IDC) opened in São Paulo, Brazil.

IDCs are a new product in a growing market estimated to be worth billions.

The IDC in Brazil is the first of three ordered by broadband and IP operator Diveo Broadband Networks. The other two are being built in Buenos Aires, Argentina and Mexico City. This strategically important order is worth up to USD 200 million, which Ericsson secured in hard competition with Lucent.

"This order opens up the door to new markets for Ericsson. We want to position ourselves in the data/web center field and our goal is to challenge Cisco, who currently dominates the market," says Martin Sjöstrand, Global Account Manager for Diveo.

Leasing saves money

The centers are designed for Application Service Providers. These are companies that offer data applications and programs to other companies who have chosen not to administer them themselves.

A reason could be that a company can not to afford to invest in the personnel and products needed in order to achieve the required security and performance. Calculations show that the company can save between 70 and 80 percent of its data costs by leasing Internet resources rather than building up its own centers. Examples of customers include Application Service Providers, such as IBM, or IT-intensive companies and e-commerce companies.

The building in São Paulo, which is the sizw of two soccer fields, has space for thousands of servers. The heart of the system is Ericsson's ENGINE concept, which allows high-quality broadband IP connectivity.

Ericsson has overall responsibility for the facilities, which are delivered in turnkey condition, and guarantees that the equipment is the best available. This means, among other things, that the routers are currently being supplied by Cisco.

"The goal, however, is for more of the equipment to be our own. The routers will, for example, be replaced by new ones from our partner Extreme Networks," says Henrik Ericsson, Director for IDC business at the Diveo Accunt.

Growing rapidly

Demand for these kinds of data centers is growing rapidly and involves large sums of money. According to the analysis company OVUM, the market will be worth USD 45 billion in 2004.

Currently, the different interests are standing in line to build Internet Data Centers.

Markets such as South Africa, Taiwan, India and Australia have already expressed an interest.

Several traditional telephone operators have also left the starting gate. This includes Telia, which has built a data center in London, and British Telecom, which is investing billions on centers all over the world.

Responsibility for the Internet Data Center product will lie with the Multi Service Networks Division, which is in the process of developing a product portfolio.

"But much of the credit goes to employees in Brazil who, in just a short period of time, put together a team that was able to handle the implementation of the Diveo project," says Henrik Ericsson.

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Young people key to 3G sucess

"The young people of today will determine whether or not Ericsson's efforts in third-generation mobile telephony (3G) will be successful. Only by studying how today's youth use the Internet companies canhope to attract and retain them as consumers," says Bo Albertson, head of marketing at Ericsson Mobile Communications AB.

Bo Albertsson wants to capture young consumers. Foto: Peter Nordahl

"By the year 2003, we anticipate that a clear majority of all people who connect to the Internet will be doing so from a mobile phone rather than a computer," says Bo Albertson.

Ericsson Mobile Communications believes that this group will consist largely of young people between the ages of 15 and 25. In all likelihood, they will be using the Internet for two primary reasons: To communicate with their friends and to consume music. A recent survey published by the Swedish newspaper Dagens Nyheter showed that 64 percent of all Swedish people between the ages of 15 and 24 regularly download free music, in the form of mp3 files, from the Internet.

"Considering that most of them will be using their mobile phones to download these music files, it's important that Ericsson create products and services as early as possible that facilitate and stimulate such usage," says Bo Albertson.

Earlier this year, Ericsson's mp3 Handsfree attachment, the HPM 10, became available in stores, becoming the world's first dedicated mobile phone mp3 player. So far, sales of HPM 10 have been brisk, but it will probably not be long before competitors launch similar products. That means Ericsson will have to stay one step ahead in the development process.

"The HPM 10 plugs into the bottom of a mobile phone. Before long, however, there will no doubt be phones that have built-in mp3 players. What's important now is to work on increasing transmission speeds between the Internet and mobile phones in the relatively near future, something 3G technology will help us accomplish."

Ericsson's collaboration with MTV, which began with the MTV Music Awards in Dublin, Ireland last year, has meant a great deal to Bo Albertson and his colleagues.

"If we're not successful now in encouraging young people to use our mobile Internet services, it could be difficult for Ericsson to get a real boost for its 3G effort. In the final analysis, it will be young people and not middle-aged men in suits who will be the largest group of consumers of 3G services," says Bo Albertson.

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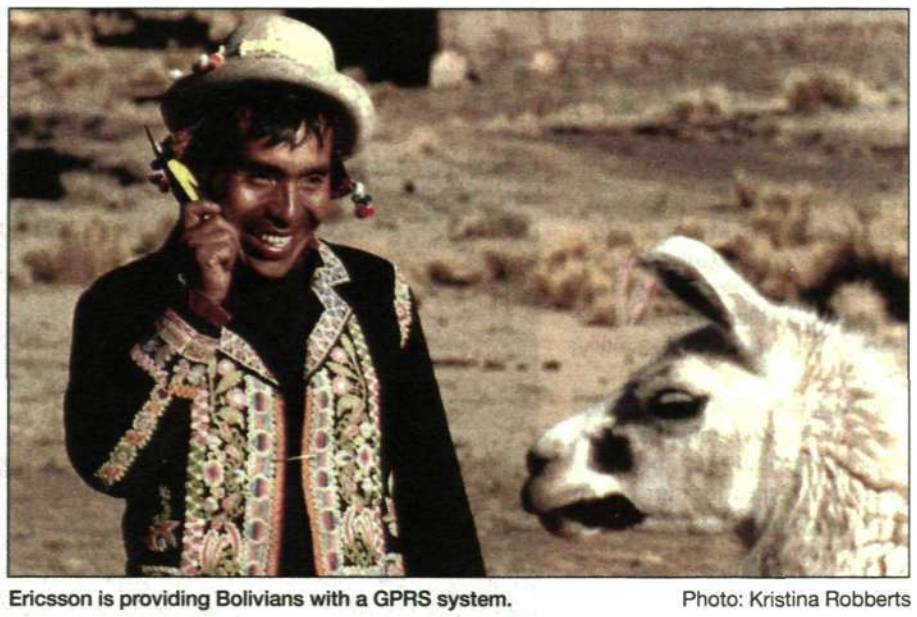

Ericsson is providing Bolivians with a GPRS system. Photo: Kristina Robberts

Bolivia first with GPRS in South America

Bolivian mobile phone operator Entel Móvil has selected Ericsson to deliver Latin America's first GPRS network. The company has signed a three-year general agreement worth about USD 36 million.

Ericsson will supply a turnkey GSM/GPRS 1900 MHz system to Entel Móvil.

With this new contract, Ericsson becomes the first company in Latin America to offer both GSM and TDMA to its customers. Entel Móvil was also the first operator to offer digital mobile telephony in Bolivia, when Ericsson delivered a TDMA network in 1996. Initially, standard GSM services will be available in La Paz, Santa Cruz and Cochabamba. Commercial services will be made available on the GSM network starting in December of this year. The GPRS network will be launched during the second quarter of 2001. Entel Móvil has 260,000 subscribers and is owned by Telecom Italia.

Donal Lynch is a sales representative for Ericsson in Bolivia. He explains why Bolivia was first in the region to receive GPRS. According to Lynch, Telecom Italia believes strongly in the future of GSM, which is the foundation of GPRS. Since they were planning to implement GPRS sooner or later, it made sense to do so as quickly as possible.

Ericsson is a world leader in GPRS. The company has signed 59 commercial agreements worldwide.

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First wireless call on new IP version

Together with BT Wireless and Hong Kong operator SmarTone, Ericsson provided the first successful demonstration of the new Internet protocol IPv6 all the way across a mobile network.

The demonstration was conducted on SmarTone's network, which is equipped for GPRS. Calls were also successfully roamed between the fixed to the wireless network, and IPv6 was shown to interoperate with today's IPv4.

Hierarchical structure

The new IPv6 Internet protocol is being developed to handle the increased demand for IP addresses. The address scheme is hierarchically structured, somewhat like the telephone network's area codes and local numbers, which is necessary to handle large numbers of addresses.

With its 32-bit addresses, the current IPv4 protocol is only able to handle a theoretical maximum of about four billion addresses. In reality, however, due to a skewed distribution of addresses, the number is significantly smaller, meaning that IP addresses will be exhausted within a few years.

IPv6, on the other hand, uses 128-bit addresses, allowing 3.4×10^{38} addresses, which is virtually unlimited and more than enough to allow all conceivable electronic devices to communicate with each other.

In tomorrow's world of the mobile Internet, intelligent homes in which computers, mobile phones and household devices will constantly be connected to each other, IPv6 will play a very important role.

Ericsson has taken a leading role in developing IPv6. Latif Ladid from Ericsson Telebit is also the chairman of IPv6 Forum, which is a global consortium with many members.

Prioritizing services

In addition to meeting the needs for more IP addresses, the new Internet protocol has a number of other advantages.

These include Improved Security (IPSec) and Quality of Service (QoS), which will provide an efficient means of improving quality and prioritizing various types of services, rather than over-dimensioning the network.

Another advantage is Route Optimization for selecting the shortest path, which is an integrated function in IPv6.

IPv4 and IPv6 will co-exist for some time. Until backbone networks have been built for IPv6 and servers and routers are upgraded, end-to-end communication using IPv6 will be effected by tunneling IPv6 packets, which will be embedded in IPv4 packets. This will allow operators to make a gradual transition.

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www.ericsson.net/review/2000_01/article94.shtml

www.ipv6forum.com

Hats off for Jan Uddenfeldt

On Friday, November 10, Ericsson's Senior Vice President, Technology, Jan Uddenfeldt, received the Grand Prize from the Royal Swedish Institute of Technology in Stockholm.

This prize is awarded to persons whose achievements are of great importance for Sweden.

In motivating its decision, the jury noted that Jan Uddenfeldt had developed the theoretical and practical foundation for digital radio technology that provides the foundation for today's communications networks, such as GSM and UMTS.

Another factor was that Uddenfeldt had driven the international standardization process that laid the foundation for Ericsson's commercial success.

Jan Uddenfeldt himself emphasizes that he views the prize not only as a recognition of his efforts, but also of Ericsson and its strong research and development and marketing organizations.

Ericsson employees have received the Grand Prize on two occasions previously. In 1980, the prize was awarded to Bengt Gunnar Magnusson, one of the brains behind AXE.

The second time, in 1994, the recipient was Åke Lundqvist from Ericsson, who shared the prize with Östen Mäkitalo of Telia and professor Sven-Olof Öhrvik, who had previously worked at Ericsson.

The prize and the sum of SEK 800,000 were awarded during a ceremony at which the Royal Institute of Technology promoted its new professors and doctors of technology.

Jan Uddenfeldt (left) was awarded the Royal Swedish Institute of Technology's Grand Prize at Stockholm City Hall by the school's Chairman of the Board Ulf J Johansson. Completely in the spirit of the times, Ulf J Johansson announced that the prize money would be transferred using WAP and an Internet bank. Photo: Bengt Vängstam

Lars Cederquist

Access to sponsor DSL research

The Access Networks business unit at the Multi-Service Networks division will finance three or four graduate students at the Lund Institute of Technology over five years. The researchers will develop new technologies for broadband transmission over copper.

"We intend to take control of the technology and lead technical development. This is an area where there is a lot to be done," says Albin Johansson, who will be one of the new graduate students. Currently he heads a group working with DSL design within Access Networks.

Higher speeds

DSL, Digital Subscriber Line, is a collective term for broadband transmission over ordinary copper wire. Asymmetric DSL (ADSL), which is the most common, provides higher speed in one direction.

The current limit is 8 Mbit/s to and 1 Mbit/s from the subscriber.

"We will start research on 10 Mbit/s symmetrical transmission and asymmetric transmission at 20 Mbit to and 3 Mbit from the subscriber and proceed from there," says Albin Johansson.

Back to school

Initially the research team will consist of three graduate students who will collaborate with Ericsson's research lab. Per Ola Börjesson, who is a professor in signal processing at the Lund Institute of Technology, will lead the research team.

"The advantage of conducting research in an academic environment is that the research has greater depth. It's also a valuable marketing channel. We want to show the industry that we know this technology," says Albin Johansson.

He admits, however, that being back at school was a little unfamiliar at first.

"It had been seven years since I left the Royal Institute of Technology, and there were a lot of things that I had forgotten. Most things came back to me, however, and everything is going well now," concludes Albin Johansson.

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Self-help new method for network support

A completely new system for network support will reduce cost for customers and for Ericsson.

The new Web-based system is called a e-support system. A basic premise is that customers should solve their own problems.

The system, which is being introduced in 34 markets during 2001, was developed by Customer Services, which is part of the Global Services division.

"3G, all the new mobile Internet applications, support for third-party suppliers and everything else means that demands are increasing and that fast and effective support is necessary," says Jan Ljungstedt, who is responsible for the e-support Systems Program.

Compiling experience

The foundation is a Web-based database system in which experience from the entire world is compiled. The idea is that engineers in different locations should not have to solve the same problem repetedly.

"A support person in the US recently handled a problem that took him eleven hours to solve. Three days later, the same problem occurred in Australia. Based on the experience from the US, the problem was solved the same morning," relates Jan Ljungstedt.

This not only means savings for Ericsson. Customers profit greatly because faults can be corrected more quickly.

The objective is that customers in many cases should not even need to contact the Ericsson help desk.

Via the e-support system, the customer receives an immediate proposal for solving the problem that has been described. There are currently about 1,500 problem solutions in the system.

Increasing profits

It is also important to get more customers to pay for support. The system contains an administrative component that informs the support person if the customer has paid for the support being requested or if extra charges for the service should be invoiced. The increase in efficiency will free up about 1,000 man-years of support resources. No jobs will be eliminated, however.

"Growth in 2G and new investments in 3G will increase the need for support. More personnel will be needed," says Jan Ljungstedt.

The goals for the new system are ambitious. Customer Services intends to increase profits and double sales by 2002.

The time it takes to process a customer inquiry will also be reduced. Currently the average is eight days. The goal is to process half of all inquiries in less than half an hour.

"That may sound impossible, but we can do it with the new system," concludes Jan Ljungstedt.

Lars-Magnus Kihlström

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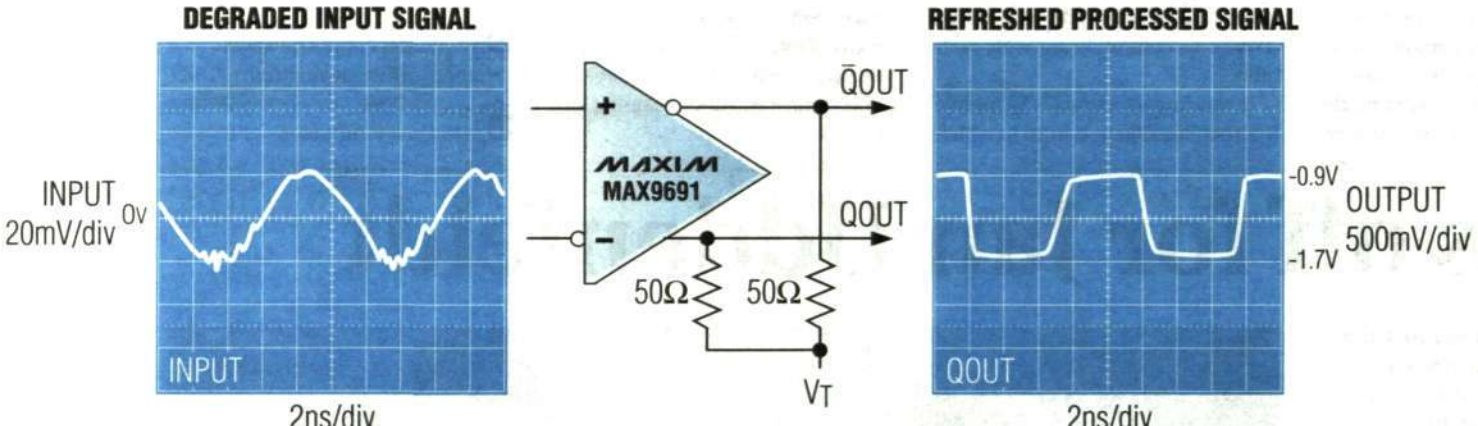

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MAX9692	Yes	1.2	1	600	10-µMAX, 16-SO/PDIP
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Secure payments via WAP

Jalda is the name of a secure payment method for e-commerce. And it has what it takes to spark the development of mobile Internet services.

The technique is based on a trusted third-party who oversees transactions between customers and service providers. Now, an increasing number of companies are signing on as trusted third parties.

A seminar was recently held regarding the development of 3G from the consumer standpoint.

Ericsson and Hewlett-Packard's jointly held company, EHPT, was on hand as was Icon Medialab, to demonstrate a new concept known as J-box, an electronic jukebox that allows customers to pay for the service using their WAP phone. J-box is an outstanding example of how Jalda operates.

In the scenario envisioned, the customer could be sitting at the bar and order a song to play on the jukebox over in the corner of the room using his mobile phone.

Interest in the J-box and Jalda was great among the visitors to the Grand Hotel in Stockholm. Patrik Attemark fielded numerous questions about how the technique works. Photo: Jesper Mott

Third-party security

The customer can review playlists over his or her phone. Once the customer has selected a song, the choice is confirmed and a message about what it costs is sent to the mobile phone. The customer approves the payment transaction by entering a PIN code. Using Jalda, small payments like these can be invoiced to one's telephone bill, for example.

What, then, is it that makes Jalda so secure?

Patrik Attemark is the head of marketing for Internet Payment Systems at EHPT.

"The entire concept is based on a third-party model. In addition to the customer and the service provider, there is also a trusted third-party, a Payment Service Provider (PSP), who completes the payment transaction."

"The trusted third-party can, for example, be an operator, a credit card company or a bank."

Companies that provide services sign an agreement with the Payment Provider. The provider then oversees customer payments for services. Customers are also registered with the third-party.

Registered customers

Jalda records all the transactions that occur between the customer and supplier. In addition to accepting payments, it is also possible to provide customers with information about earnings or bonuses.

EHPT Safetrader is the first product to be based on Jalda.

It is a payments server that is handled by a PSP and monitors all payments between a customer and a supplier.

Patrik Attemark explains that the customer can pay large and small amounts with Jalda and make use of both wireline and mobile Internet connections.

Numbers growing

Telia was first to join as a trusted third party. It has been followed by Finnish Suomen 3P, Wish of the Netherlands, the UK's World Online, and a number of other companies.

Operators throughout the world have invested enormous sums of money to obtain 3G licenses.

This money must generate revenues and, if e-commerce does not have a well-functioning payments standard, it will not be possible to develop any of the services.

"In that case, 3G will be no more than new and exciting technology."

To ensure rapid development of the use of Jalda, the trusted third parties must be linked together so that customers only have to sign up once.

"This will probably take place next year. The technology already exists," says Patrik Attemark.

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All vacant jobs showcased on Ericsson's new job site

The ericsson.com Internet site is part of a global project to convey a uniform image of Ericsson. As part of that project, a new site for job listings – ericsson.com/jobs – is now being launched.

All available positions within the company will now be posted on one site. The goal is to attract competent employees from around the world.

Mita Ryrbäck-Reinefjord, who oversees recruiting and marketing for Corporate People and Culture, has been involved in designing the website.

She says that it is much easier to post job listings on the new site. Moreover, visitors are greeted with a homepage that logically arranged and easy to understand.

In time, she believes that all of the recruiting sites that Ericsson's local units around the world have developed, will be consolidated under the new service.

All in English

The site's predecessor was also an attempt to combine everything in one location, but the results were not successful, with information posted in numerous languages. Now, all the ads are written in English so that everyone who wants to go overseas can also read which jobs are available.

"Only 14 or 15 countries were included on the old recruitment site. The person responsible for each available position had an option of how they wanted to link their documents to the page. The result was a sprawling page with far too many layers. Now all of the ads are in the same format."

Has Ericsson's recruitment efforts over the Internet been lagging in the past?

"Yes, absolutely. On a global level, we've missed people who had an interest. They haven't been able to find a convenient entrance and they haven't known where to turn. Now everything is available in one location."

There are also several entertaining aspects to the site. By clicking on various banners, visitors can, for example, play games or read about common sense and etiquette when traveling in various countries. These extras will continue to change.

"It should be a living website. People should think its fun to routinely go back and look at what's going on."

In the future, job applicants will be able to post their CV resumés and present themselves on the site. Both external and internal versions are available, although the site looks the same on the intranet.

Mita Ryrbäck-Reinefjord describes the new website as more focused and entertaining. Photo: Ecke Küller

How will you measure the site's success?

"We'll be conducting customer studies where we measure market awareness. We'll investigate how aware people between the ages of 28–35 are that Ericsson is a company that is seeking out their services."

The new job site will be available to visitors starting November 24.

Jesper Mott

IT revolution in defense industry

The future of warfare will be more about IT than bombs and hand grenades.

For that reason, Sweden's armed forces have contracted with Ericsson and SAAB to find solutions for new network-based defense.

In order to demonstrate its broad range of products, Ericsson arranged a seminar for the military on November 11.

"With the transition towards a network-based military, we have an enormous amount to offer. We will definitely play a more central role in the future," says Svante Bergh, head of marketing at Ericsson Microwave Systems.

Developments within IT and precision weaponry have changed how armed forces are preparing for eventual future conflicts.

Network-based defense

In military jargon, there has been a great deal of talk about Revolution in Military Affairs (RMA).

RMA is based on the opportunities that IT technology provides to convert to a network-based defense system.

"We have to reevaluate what we're protecting ourselves against and how we are going to go about doing that," says Per Nilsson at Swedish defense headquarters.

"Information is becoming increasingly important for the armed forces, and we need to have wide latitude to adapt our efforts since the global situation can change so rapidly."

Special military requirements

Military requirements on backbone systems are stringent; centralized systems are unacceptable.

The armed forces are seeking internationally competitive solutions with open standards that simultaneously maintain unique aspects of a country's system, for reasons of security.

Conditions are right

Sweden is in a good position with a strong, highly developed industrial base located inside its borders.

"The fact that we can benefit from the skills that are available within companies like Ericsson and Saab, gives us an enormous competitive edge. When it comes to systems thinking, Sweden is on the absolute forefront," says Per Nilsson.

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More failed 3G auctions

>> Following auctions in Italy and the Netherlands that generated significantly lower revenues than anticipated, similar problems have arisen in Austria and Switzerland. Once again, suspicions of conspiracy among bidders have been raised. In Switzerland, the authorities were forced to cancel the auction entirely after the number of bidders had fallen from nine to four, corresponding to the number of licenses that were to be auctioned out.

Those remaining are Swisscom, Orange, diAx's dSpeed and Spain's Telefónica. Acquisitions and mergers were the reason for the reduction in the number of bidders. The Swiss authorities hope to resume the bidding process in December.

In Austria, six licenses were auctioned off. The proceeds amounted to slightly more than USD 583 million, which was less than half of what was expected.

Lack of phones from Motorola

>> Motorola is unable to deliver GPRS phones. That's what British operator Orange's international President, Michael Latimer, said during a recent visit to Stockholm.

The background is that Motorola's European manager Rick Darnaby recently stated that Motorola would be the first in the world to deliver GPRS phones, a claim that Michael Latimer thus refuted.

"We cannot launch a service if they cannot guarantee that we will have phones to meet customer demand," says Latimer, who said that his company's requirements are 100,000 phones per month.

Ericsson has supplied the infrastructure for Orange's GPRS network.

Beauty contest delayed in Sweden

>> The Swedish Post and Telecom Authority will probably not be able to meet the previously announced deadline of November 30 for picking the 3G license winners.

A delay of about two weeks is expected. Ten consortia have applied for four announced licenses.

Extended keyboard for i-mode users.
Photo: Lars Åström

i-mode boosts DoCoMo's earnings

>> Japanese mobile operator NTT DoCoMo's six-month report was significantly better than expected, with net earnings of USD 2 billion. Behind this growth is i-mode, which accounts for more than two thirds of the Japanese market for mobile services, measured in terms of total subscribers. In September, the number of subscribers amounted to 14.3 million. DoCoMo in Japanese means everywhere.

Phones beep as friends

Custom ring signals, each reflecting the user's personality, echo in the corridors. Students interact using their mobile phones to talk, send messages or play games.

Visiting a typical high school in Scandinavia is a very different experience today than it was a decade ago. Various forms of wireless communication have become commonplace. SMS is the latest form of communication to take the younger generation by storm. Nowhere is this more evident than at a high school.

Contact visited Kungsholmens Gymnasium, a secondary school in Stockholm's inner city and talked to Manne Forssberg, David Krantz, Stina Fischer, Tanja Küller and Benjamin Metzger.

"Getting SMS messages really makes me happy, but it takes so long to enter a message. I wish there was an easier way," says Manne.

Awkward keypads

Other students gathered around a cafeteria table agree. They are all 18 and in their final year of school. Everyone thinks that entering messages is awkward, even though they eventually learn to find the right symbols and enter text more quickly.

"It does force you to use simpler language with lots of abbreviations," says David.

"You also don't use whole sentences, since no one takes the time to enter periods or commas," he continues.

"I find it irritating when the message is so brief that you don't understand it," adds Benjamin.

He says that SMS serves as a substitute for phone calls, even though the interval between text messages may be longer. David agrees.

"I think a lot of people use SMS instead of calling. After all, text messages are cheaper than phoning," says David.

Price-sensitive

"If you send too many messages, of course, it gets expensive," says Stina.

"SMS really should be free, or at least much cheaper," says Benjamin.

"Yes, but you can always send SMS via the Web, which is entirely free and much simpler," counters David.

"In that case, when you're already at the computer, you might as well send an e-mail," says Benjamin.

Costs clearly dictate use, according to the group's unanimous opinion.

"Of course. You phone more in the evenings and on weekends when it is cheaper and use SMS at other times," says Tanja.

How many SMS messages are sent per day? The number varies according to the day of the week, but all agree that they send at least two messages a day.

What do the messages normally contain?

"Anything," says Stina. "Usually they're just short greetings to say 'Good night,' for example."

What do teachers say about the intensive use of mobile phones?

"At first they became very angry when phones were ringing during class, but it's better now," says Benjamin.

"Now even the teachers sometimes answer their phones during class time. That doesn't mean that you're allowed to answer calls during class, but no one gets upset anymore if a phone rings," he continues.

"With SMS, you can receive messages during classes, since the telephone can be set not to beep when a message arrives," notes Tanja.

Someone suggests that SMS could be used as a method of cheating, but no one has tried it.

However, several students have heard about an SMS service that provides information about where tickets are being checked on Stockholm's subway system. The students have also not used any of the more sophisticated services, such as Web portals for SMS services, automated sending or group messages. Most of the students know about WAP, but none of them has a WAP phone. Simple and direct messages via SMS are all they care about.

"The ones who use SMS the most are probably young girls. My sister, who is 12, is crazy about SMS. We're getting too old," concludes David.

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Young people are the dominant users of SMS. The students at Kungsholmens Gymnasium are no exception. Most of their messages are short greetings, according to Tanja Küller (left), Benjamin Metzger, David Krantz, Stina Fischer and Manne Forssberg.

Photo: Ecke Küller

SMS opens the door to the mobile

By year-end, some 15 billion SMS messages will be sent each month.

"What was previously a cult phenomenon has become a mass culture," notes Jim Healy at the GSM Association.

In Germany alone, more than one billion SMS messages are sent each month. In Denmark, one user sent 20,000 SMS messages over a three-month period. He was forced to seek help for his addiction.

Much has happened since December 1992, when the first SMS message was sent over Vodafone's network in Great Britain. It is only in recent years, however, that usage has exploded.

"It is evident that there is a great need that generates such a large volume of text messages," observes Jim Healy, who is a board member of the GSM Association.

Extensive studies

To determine what the rising popularity of SMS means for the industry, Ericsson is conducting extensive studies. One such study, which includes questions about SMS usage, shows that SMS is now a global phenomenon. Text messages are used just as frequently in Japan's i-mode service, which owned by NTT DoCoMo.

Young people dominate

"The pattern is very clear," says Erik Kruse, who is a researcher at Ericsson's Consumer Lab in Lund, Sweden. "SMS is used primarily by young people because they are curious and have a great need to communicate."

The studies also compare different types of penetration, including the number of mobile telephone users in relation to the number of Internet users.

It has been shown that in countries with high Internet penetration, SMS is used as an extended chat function, since many Web portals offer users a service for sending free SMS messages.

In countries with low Internet penetration, such as in Southern Europe, text messages are used more as a new and alternative method of communication.

"The propensity to use SMS is gradually increasing with age, and the service is being used for practical communications in an increasing number of serious contexts," continues Erik Kruse, who distinguishes between instrumental and expressive use of SMS.

"Instrumental use is about more rational communication for coordinating meeting or changes appointment times, while expressive use is about messages that express social involvement or group identity," explains Erik.

Falling prices

The price of SMS is extremely important for its growth in use. According to the Swedish Post and Telecom Authority, prices for sending an SMS message fell from SEK 2.50 last year to SEK 1.50 this year.

Nonetheless, the authority considers that SMS is too expensive. A comparison with Denmark shows that the service is three times cheaper than in Sweden.

"The general opinion is that mobile services are expensive, but since most people continue to use them, it must mean that they still think that they are worth the price," notes Erik Kruse.

In Finland, use of SMS is astonishingly high. This is because the operators have been actively marketing SMS for a long time, while sharply reducing prices.

While 14 percent of Swedish mobile phone users avail themselves of the service daily, the corresponding figure in Finland is 30 percent. In certain age groups, such as women between 15 and 25, 69 percent use SMS daily.

Erik Kruse firmly believes in lowering SMS prices. In some countries, SMS is already free, while in others the first 300 messages each month are free. In the future, it will be possible to charge to other services.

The number of SMS-based services suggests creative chaos. Shy individuals can get tips on how to meet someone. Drivers receive warnings about speed checks. Stressed out people can get soothing messages. The list of services is endless.

"New services are being developed very rapidly, but being able to charge for the service – which is difficult, given that the information is coming from the Internet and is therefore virtually free – will require services that are designed specifically with mobility in mind. Simply pulling information off the Web or condensing it will not be enough," predicts Erik Kruse.

He also expects that GPRS and future generations of mobile networks will result in a breakthrough for mobile chatting and instant messaging, such as the Internet-based ICQ or AOL's AIM.

"Wireless e-mail will surely be a huge success. The joint venture between Ericsson and Microsoft is just one example," says Erik.

Anna Hultman is on the same track. She works with issues related to young people at the Consumer Products division and sees SMS as opening the door for more advanced services in the future.

"The significance of SMS is that the phone for the first time is being used for something other than talking. It's not a complicated thing, but it's still a huge step forward," notes Anna Hultman.

Useful during meetings

She sees many advantages to SMS compared with a phone call.

SMS is not as intrusive during meetings as a phone that is ringing. It is also possible for users to select the times when they wish to receive messages.

"SMS is great when you're sitting in a meeting," says Anna. "You can also use it instead of leaving your telephone number in a voice mailbox. And why not send an SMS message containing your phone number? That makes it much easier for the recipient to phone you back."

T20 makes it easier

What is Ericsson doing to make it easier to use SMS? A lot, according to Anna Hultman, who cites as an example the new T20, which is aimed at young people.

"There are a number of functions to make it easier. All letters can be reached with a single key press, for example. Another feature are message templates, which are pre-composed messages to which only certain information needs to be added.

"It's also easy to do group sendings of SMS messages, and the phone even has an SMS counter that shows how many text messages have been sent," continues Anna Hultman.

Like Erik Kruse, Anna Hultman believes that games and entertainment will drive mobile services.

"We see a clear trend towards simple entertainment services and games as the next wave. There will also be simple applications for such things as downloading ring signals, screen savers and icons," concludes Anna Hultman.

Mats Lundström

communicate

Service offering mushrooms

Mobile services are in a phase of prolonged growth. While everyone is waiting for GPRS and WAP to take off, many wireless portals are offering SMS services that are controlled via a Web site. In Scandinavia, there are a large number of portals of this type.

One such site is Sweden's Halebop, which has a serious range of services including local news, music news and stock prices. Do users understand that they can control the service offered on their cell phones via Halebop's web site?

"Not entirely," says Hans-Anders Karlsson, press officer at Halebop. "But it's also a question of changing behavior on the part of mobile phone users.

Hans-Anders Karlsson

"There are differences among age groups, however," continues Hans-Anders Karlsson. "Older people use simpler information services for receiving stock prices via SMS, for example. Young people use our Web service more as a tool for configuring a more advanced range of services."

Hans-Anders Karlsson believes that this is a positive sign for the future when GPRS and WAP become popular.

"We believe that it is significant that so many people are now using SMS services. We support WAP, too, but it is currently lagging behind because the services are not yet attractive," notes Hans-Anders Karlsson.

For the Stockholm-based company Moby, games and entertainment have become important products. The company supplies SMS games and operates a mobile channel to the Spray Web portal, which was recently purchased by the American giant, Lycos.

"On Spray, we currently have two games. One is a quiz game in which participants answer questions from three categories and send their answers via SMS," says Carl Aust, who is an account manager at Moby.

"The other is called Phoneslinger, which is a contest where two participants compete in being the fastest to answer an SMS message. The winner advances to meet other winners until there is only one winner left," says Carl Aust.

Spray's mobile channel also provides a number of entertainment services focusing on ring signals and screen icons. Users can compose their own ring signals and design their own icons, which can then be downloaded to their mobile phones.

Mats Lundström

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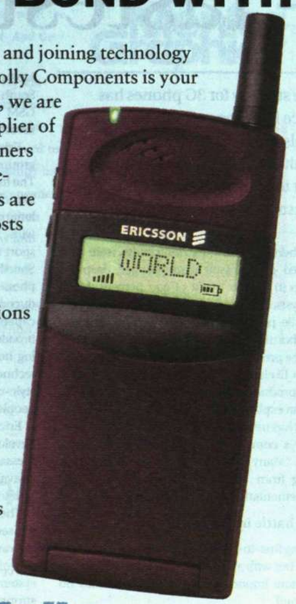

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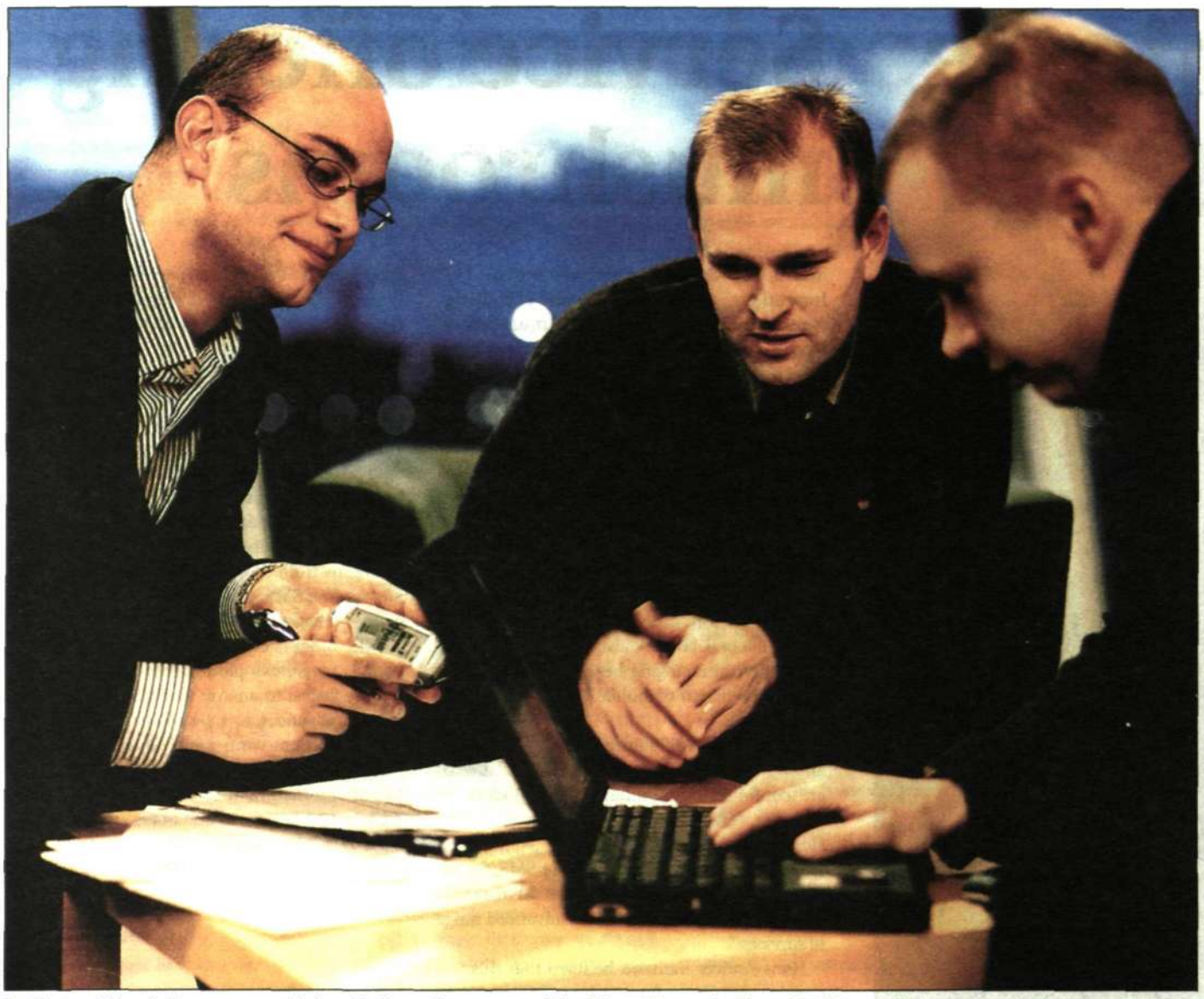

Bo Ekelund, Henrik Bengtsson and Johan Karlberg discuss one of the 3G prototypes developed by Ericsson in Lund. Rapidly developing prototypes and letting different users evaluate them is a prerequisite for creating the next best-seller. Photo: Jeffrey Richt

Only one way to win – fastest to market

The strategy for 3G phones has since long been established. The goals seem simple, but they are difficult to achieve. Ericsson must be first to market and reach as many consumers as possible.

➤ When the third-quarter results were presented, the Ericsson share plunged, despite a jump in pre-tax profit of 200 percent. Many analysts, it seems, are obsessed by the losses in mobile phones. Some wonder why Ericsson stubbornly refuses to discontinue mobile phone production.

Bo Ekelund, who is responsible for the future product portfolio of GSM and 3G phones, has an explanation:

"It has never been as important to be able to offer a complete solution as it is today," he says. "Many operators want help with everything from business strategies and system implementation to mobile phones."

The battle intensifies

"Being first-to-market has always been important, but with 3G products and services, it may be more important than ever," continues Bo Ekelund.

Ericsson's competitors have reached the same conclusion.

The battle to be first out with 3G terminals is intensifying every day. Germany's Siemens recently entered a partnership with Toshiba of Japan to develop a 3G phone. Samsung of South Korea, which more or less missed the GSM boom, has made it clear that they are investing heavily in 3G terminals.

Ericsson's strategy is to quickly reach large groups of customers. The first 3G phones to be launched will have excellent design, be loaded with technology and sport dozens of features. Shortly thereafter, phones will be introduced that are also very capable but target a broader market including both business users, technology freaks and style-conscious young people.

We are facing a shift in technology. If we are not part of it from the start, the market will leave us behind.

Bo Ekelund

Ericsson is focusing on three main areas in developing terminals and services: images, messaging and positioning. Details are as yet unavailable, but curious readers will soon be able to obtain more information.

The 3G market is expected to take off during the second half of 2001, starting in Japan and followed soon thereafter by Europe and the rest of Asia. Ericsson will have terminals and systems ready simultaneously to meet the strong demand. To achieve this goal, cooperation is essential with both internal and external partners.

"Today, we are working more closely with operators and system designers than ever before. Being first in both systems and terminals will allow us to take the lead from the start," says Henrik Bengtsson, strategic product manager for GSM and 3G.

Bo Ekelund and Henrik Bengtsson view the operators as their eyes and ears on the market. They have extensive knowledge about consumers in their local markets and are an excellent supplement to Ericsson's own market research.

Advance planning

Another prerequisite for success is advance planning.

Planning has therefore already been started on products that will be launched in three years. Bo Ekelund has also prepared a financial plan that extends to the year 2008.

Just as important as advance planning is flexibility and the ability to respond to prevailing trends. Who could have predicted, for example, that SMS would be such a resounding success?

"Being able to look ahead is naturally important, but we must not forget that GSM and GPRS will continue to be important markets for a long time to come," concludes Henrik Bengtsson.

Ulrika Nybäck
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Getting to know customers

What makes certain telephones best sellers? For Johan Karlberg at the Consumer Products division, the answer is simple: knowledge of the target group.

➤ "It's a matter of knowing consumers better than they know themselves," says Johan Karlberg, who is the manager for the Consumer Research Applications unit within Consumer Products. "Only then can you draw conclusions about what phones and services consumers will want in a few years' time."

There are two groups working with market research at Ericsson in Lund. Their task is to obtain as much information as possible about the groups to which they intend to sell phones.

What are their values and attitudes? What do they read? How do they interact? And above all, why?

Interviews important

Ericsson's recently introduced T20 WAP phone was warmly received by the press and the public.

The reason it looks the way it does is due in large part to knowledge of the target group and successfully communicating this knowledge to the industrial designers.

When the design was developed, a study was conducted that showed that the designers were on the right track. The study was based on focus groups with a number of young people who were chosen on the basis of certain criteria, including age, gender and computer usage.

During the interview, a projective technique was employed that entailed letting participants see images of different people and then relating which they thought would buy the phone and why.

Drawing the correct conclusions from market studies requires good knowledge of people. The best analysts are therefore often behavioral or social scientists. The analysis work is often the most difficult, since it requires interpreting answers and drawing reasonable conclusions.

"If the people in a focus group do not like a product or a service, we must try to determine why. Only when you understand the barriers that are present is it possible to eliminate them," says Johan Karlberg.

Probing the future

The most difficult part of a marketing study are the interviews that relate to products and services that do not yet exist.

During these interviews, it is necessary to describe future services and products in a simple yet realistic manner and to then lead a discussion about them.

"Marketing studies are increasingly important in a competitive market. At the end of the day, it is the consumer who decides what products and thereby what companies will succeed. For Ericsson, it is a question of getting involved in the process at as early a stage as possible when a new telephone is being developed," says Johan Karlberg.

Ulrika Nybäck

Mission: trend-watcher

In Asia, 70 percent of consumers choose their mobile phone based on its appearance. Europe is moving in the same direction.

Michel Sabouné and Michael Henriksson ensure that Ericsson keeps up with current and future trends.

➤ Michel Sabouné's phone rings constantly. The launch of the T20 WAP phone is just an hour away, and his colleagues are feeling the stress. Finally he turns the telephone off, so that he can carry on with the interview.

Michel Sabouné is in charge of industrial design for the Consumer Division. He explains how the third-generation mobile phones will differ from today's phones.

Larger is simpler

"The larger display will be a distinctive feature," he says, displaying a prototype telephone, on which the display takes up almost the entire front side. "But consumers will not accept phones that are much larger or more expensive that today's phones," he says.

"With increased network capacity we can be fairly sure that various types of visual information will be popular, such as viewing and sending video clips. The larger display will also simplify chat services," he continues.

Even the way we interact with the telephone will change, and Michel Sabouné foresees a scenario with several options – everything from a touch screen to a small pen and the traditional buttons.

A question of balance

When you look at Ericsson's latest models and see how their design has developed, you might wonder if there is not a risk that the Company might lose the typical Ericsson design features and other hallmarks.

"It's a question of finding a balance," says Michael Henriksson, industrial designer in charge of concepts and communications for the Consumer Division.

"Customers must be able to recognize our products, but at the same time, Ericsson must develop its design language and dare to make changes."

Mobile-phone design follows the trends in closely related industries.

Consumers have become used to a range of different casings, materials and colors. Influences come from all areas where mobile phones are used.

"We're heavily influenced by the fashion industry, and we have to know what colors and materials will be popular a few years from now. We're also influenced by the computer and automotive industries," says Michel Sabouné.

Phones and their accessories have become aspects of people's identity. An mp3 player and an FM radio can transform a mobile phone into a jogging partner. The strap for the T20, and the casings in different colors and materials, give signals, just as clothes do, about the bearer's personality.

Michel Sabouné and Michael Henriksson lead industrial design operations from the Ericsson office in Lund.

They develop strategies and processes, and ensure that industrial design remains a key aspect of the development of any new phone.

"In our job, cooperation is everything. When we developed prototypes for 3G phones, we worked closely with Ericsson research centers, system-oriented operations and cyber-labs. The design office in Singapore, for example, recently developed a prototype for a 3G telephone for demonstrating coming services," says Michael Henriksson.

Finger on fashion pulse

Keeping up with the latest color and design trends is almost a full-time job.

To stay current in a rapidly changing world, Michel Sabouné and Michael Henriksson read magazines, attend fashion shows and visit trade shows.

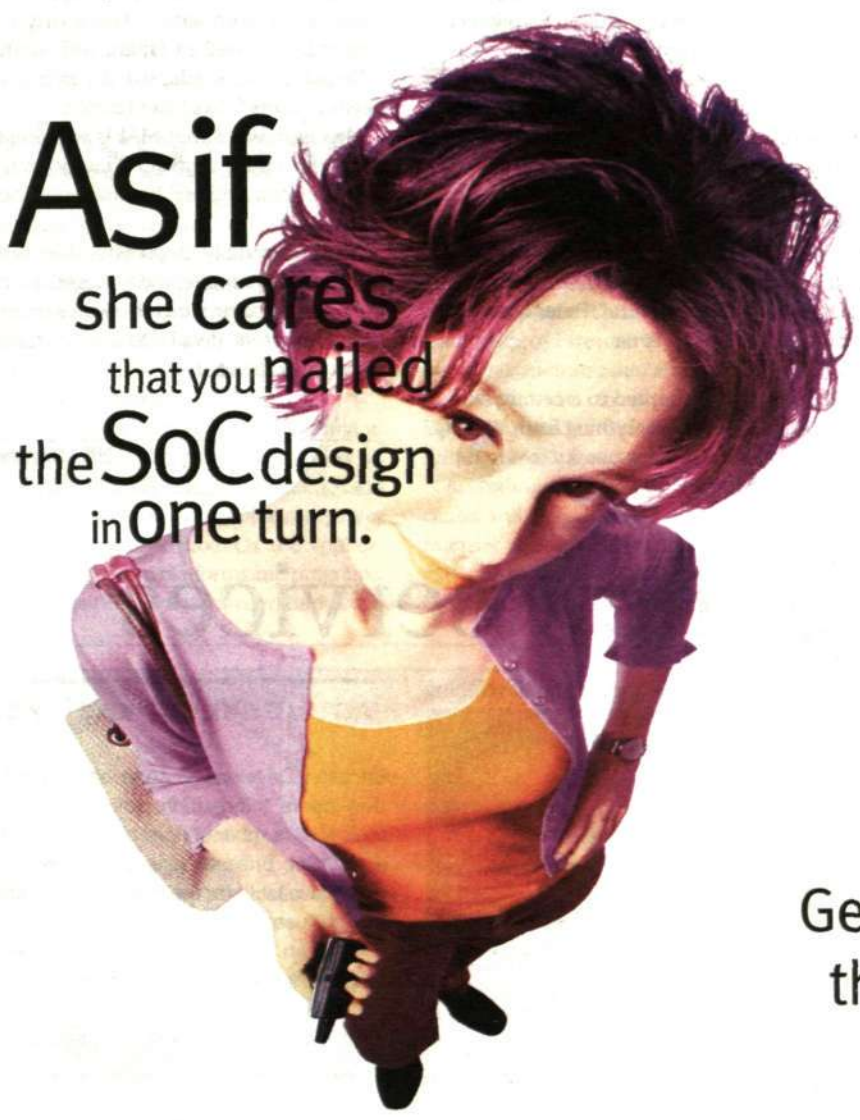
They have also entered into a cooperative venture with a company that specializes in identifying the characteristic colors of upcoming fashion seasons.

When asked what phones they are using now, they laugh. Testing telephones is an everyday task and an important part of their work.

"We use different telephones all the time. Right now, I'm using a T28, but in half an hour, I'll being using a T20," says Michel Sabouné, just before they rush off to the press conference.

Industrial design is making inroads into an increasing number of areas, including the computer world. Michel Sabouné and Michael Henriksson make sure that Ericsson follows the right trends when the colors and designs of phones and handheld PCs are being decided. Photo: Lars Åström

Ulrika Nybäck



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Getting first to the Mobile Internet? Now that rocks.

REAL TOOLS FOR THE REALLY HARD STUFF

A key element in the strategy for the Internet Applications and Solutions Division is to advance mobile Internet. Though the Mobile Applications Initiative (MAI) and the Developers' Zone, Ericsson spreads know-how to companies that develop applications. They receive support, training, access to Ericsson technology and 25 test labs worldwide.

The entire market must grow. So everyone is welcome, even competitors. Contact took a closer look at MAI and the Developers' Zone. We also visited Picofun, a company that makes games for mobile phones.

All developers welcome at new test center

Sten Söder, Ana Manjon Torres and Per Iwas work at the MAI center in Kista on GPRS demo and applications tests.

Ericsson's interests are best served by sharing information. At least that is the principal behind the Mobile Applications Initiative (MAI), through which applications from developers, some even competitors, are tested.

➤ The goal behind the project is to serve as a catalyst for Ericsson's mobile packet data systems.

By the end of the year there will be more than 30 MAI-test centers around the world.

"We're trying to keep an open attitude towards the industry. It's not always so easy for Ericsson to maintain that contact since we're dealing with competitors and nobody else within Ericsson knows how to deal with them," says Peter Lowten, head of the Mobile Applications Initiative (MAI), which is headquartered in Kista.

"Our primary goal is to support Ericsson's infrastructure sales for GPRS and UMTS. In the American market, we're also working with CDPD and cdma2000," says Peter Lowten.

More than 1,000 companies are members of MAI, which operates 25 test centers around the world.

The MAI labs are operated in conjunction with Ericsson's local companies, allowing developers and operators to test new applications, making them more user-friendly and reliable and even developing them for higher data transmission speeds.

Peter Lowten

"So far, MAI has completed testing of more than 100 GPRS applications. That includes not only testing services, but also understanding how services are developed and how applications should be integrated with the Internet," says Peter Lowten.

This work is not limited to a certain kind of service but includes everything from WAP applications for existing networks to streaming video in UMTS networks.

"There are no 'killer applications', only personal 'killer portfolios.' That's why i-mode succeeded so well in Japan, with numerous different services adapted according to the needs of users," says Peter Lowten.

He emphasizes that MAI is working to expand the entire market. Consequently, MAI also tests competitors' handsets on Ericsson's systems.

"It is incredibly important that products from various suppliers work together. It's not up to us to decide which handsets or applications operators decide to use in their networks," says Lowten.

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Open doors encourage new services

New mobile Internet services are being created from the bottom up. Currently, Ericsson supports more than 72,000 third party developers who are working on services for technologies such as WAP, GPRS, EPOC and Bluetooth. The Ericsson Developers' Zone website is a key access point for those developers.

➤ In just one year, the Developers' Zone website has registered 72,000 people and 1,400 companies who want to know more about Ericsson's products and solutions for mobile Internet, as well as to test their applications on Ericsson's systems.

"This is a very valuable database for us. Competitors such as phone.com, Nokia and Motorola all have similar efforts. The difference is that we have the broadest selection of product offerings for mobile Internet. With the clout that our leading market position provides us, many developers are turning to us to get help in testing their applications as well as business concepts," says Anders Lundvall, head of Ericsson Developers' Zone.

His task is to make Ericsson's products, solutions and technologies for mobile Internet accessible to all third party developers. That is an important part of the strategy for the Internet Applications and Solutions Division.

For understandable reasons, Ericsson will only be developing a tiny portion of the overall number of applications that are anticipated to be available on the market for the new mobile networks.

Anders Lundvall

"We expect that our application developing partners will be responsible for a large portion of the applications that Ericsson will offer. Moreover, the absolute largest portion of applications available in the marketplace will be created by third party developers. Developers' Zone is playing a key role in those efforts," says Anders Lundvall.

The goal is to have 100,000 registered Ericsson Developers' Zone users in 2001.

An important part of Developers' Zone is also to find applications in which Ericsson would like to be a partner.

Closer collaboration with selected companies occurs through the Ericsson Developers' Zone Alliance Program.

"There are currently 1,400 companies in the alliance program, and our goal is to increase that number significantly in 2001. It is an incredible strength for us to get to know and understand these companies," says Anders Lundvall.

Nils Sundström

FACTS/**DEVELOPERS' ZONE**

Ericsson Developers' Zone offers third party developers information, training and testing tools for a number of open technologies as well as specific Ericsson systems. Currently, support is available for the following technologies: WAP, Bluetooth, EPOC, GPRS, SMS, Ericsson's own Mobile Positioning System and GSM on the Net. To find out more:

www.ericsson.com/developerszone/

Hone social skills with mobile phone

Ericsson's collaboration with Swedish gaming company Picofun is just one example of the efforts the company is making to support third-party developers of mobile Internet applications.

➤ Ericsson is currently showcasing games created by Picofun on its GPRS test network, which is operating in several locations around the world. It is important to demonstrate that networks and applications go hand in hand.

Picofun President, Johan Lenander, demonstrates how their new game, Lifestylers, works. The premise of the game is to create a fictitious character that interacts with other participants assuming various role-playing figures.

The goal is to become the expert in various lifestyles, such as athlete, computer nerd or Romeo. The game also encourages participants to contact the individuals behind the various role-playing figures. Development of games like this is occurring at a very rapid pace today. With GPRS, Lenander believes that things will really take off.

Johan Lenander has a past at Ericsson, as do many others at Picofun. It was therefore an easy choice for them to select Ericsson for close collaboration. They receive help from the Developers' Zone to synchronize applications with the latest telephones. Mobile Applications Initiative (MAI) assists them in testing in the GPRS lab, and the company also has access to Ericsson's WAP portal. But why Ericsson as a partner?

"That happened simply because many of us came from there. But we're also working with others. It's important that applications operate on all terminals. Products will then be accessible on as many sites as possible, which benefits everybody."

Johan Lenander does not believe that Ericsson's focus on third-party developers will lead to a brain drain, weakening Ericsson. He thinks that the efforts Ericsson is making will be returned to the company several times over.

Is it expensive to put games in mobile phones?

"Many operators have a special rate when it comes to WAP services, which is less than ordinary calls. GPRS will be very important once it is here. I think that customers will pay a fixed fee to be a customer and then pay extra for each service they want. With GPRS, you are constantly connected and can receive information when it arrives."

Picofun has also recently released a martial arts game, Fight Arena, which was created for GPRS.

"This is one example of how we collaborated with Ericsson. They heard from their operators that people wanted an action game. Ericsson will now able to show off a fun game that demonstrates to operators that GPRS provides something extra."

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Ericsson in Berkeley propels US mobile market

➤ At Ericsson's new research center in Berkeley, California, the future of wireless communications in the US is being shaped. Mobile Internet companies and researchers are being invited to work, test/trial and showcase the latest technology in an historic building from the end of the 19th century.

Right next to the University of California at Berkeley Ericsson inaugurated a combined research center for mobile Internet technology and special marketing lab, where regional companies can come and test their products and applications on various system platforms and programs.

"We're primarily here to transfer knowledge and assist in the development and promotion of the mobile Internet market in the US by creating cooperation with most successful companies here. This will positively show the leadership of Ericsson in this space and grow our infrastructure sales, since it will enable US mobile markets to expand," says Michael Eslamian, head of the Mobile Application Initiative in North and South America.

According to Michael Eslamian, the MAI center will operate as a catalyst for the mobile Internet industry in Northern California, and as a marketing tool for the heavily populated Bay Area region surrounding San Francisco.

One reason that the research center ended up in the middle of Berkeley is that research at the university is leading the way when it comes to mobile Internet technology. Gunnar Nilsson, research manager at Ericsson Wireless Center in Berkeley, says that proximity to Berkeley students and researchers is a prerequisite for attracting talented students and doctoral candidates to the center.

"Since we have a very close collaboration with Berkeley's computer science faculty and the Berkeley Wireless Research Center, it will be considerably easier to have them within walking distance of us," says Gunnar Nilsson.

Large operators, such as Vodafone/AirTouch and Pac Bell have moved their development operations to the area, in order to take advantage of the expertise that is available there.

"Our goal," says Michael Eslamian, "is to work with the best companies to develop products and rapidly introduce them to the market for ordinary consumers."

This also means that Ericsson can help out by letting companies use Ericsson's sales and marketing channels.

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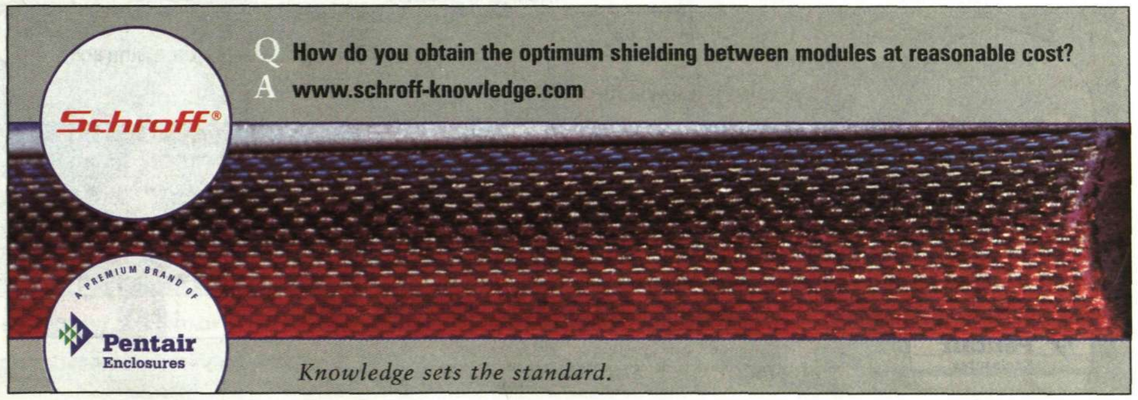

New ground for mobile networks

"No market is too small to be considered." That could be the motto for the staff of Direct Markets, a unit of the Mobile Systems Division. Their job involves working with up to 150 customers, in 100 markets. In many of the countries, the fixed telephone network is not extensive, so mobile phones are an attractive solution.

➤ The unit has 175 employees in Kista. In addition, 85 people work abroad on foreign contracts and about 500 work at Ericsson's local companies in various countries.

"Most of today's large GSM markets began as smaller operations under our supervision. One example of this is Turkey, which is currently one of Ericsson's largest GSM-markets. Another example is South Africa."

These are the words of Mats Arnamo, manager of the market unit, which currently carries the SP internal designation, though it is better known as LP.

The unit can be described as a small company within the larger Ericsson Radio Systems.

"We work with GSM, TDMA, GPRS, EDGE and WCDMA in Africa, the Middle East, Central Europe and Asia except China, and the transactions tend to be small or medium-sized," Mats Arnamo continues.

Together with the local market units, Direct Markets takes responsibility for marketing, sales, installation and commissioning.

Major sales increase

This year, the unit's sales increased by almost one hundred percent and it succeeded in securing all the contracts it had prioritized.

Saudi Arabia is currently the unit's largest market and will remain so next year. Morocco, Egypt, the Czech Republic, Slovenia and Romania are other key countries. Russia is one country that Mats Arnamo believe will soon start growing.

The unit currently has net sales of approximately USD 1.25 billion. If the markets that used to be direct markets are included, net sales rise to USD 2.5 billion.


Mats Arnamo

"It's difficult to predict which markets will become really huge," he feels. "Much depends on politics, liberalization, telecommunications, demographics and the extent of the fixed telephone network. Whether a country is highly populated – as Saudi Arabia and Russia are – is another factor.

Africa is an area of the world where mobile telephony is still fairly unusual, except in South Africa. Mats Arnamo thinks it is important to be present in a country and never to refuse assignments in small nations.

Ericsson currently has many small GSM assignments in several African countries. Although many of the countries are engaged in various conflicts, Mats Arnamo points out that even these countries have potential – as Ericsson's competitors often discover, too late.

This is exemplified by the fact that almost all GSM networks in the Balkans were delivered by Ericsson. If necessary, a mobile network can be erected in just a few days, by means of the container solution developed by the Direct Markets unit.

Package solution

A package solution, in which technical solutions are adapted through the removal of certain special functions, can make it easier for many operators to start offering mobile telephony.

This can then turn into a platform from which Ericsson can sell more later on. Apart from GSM systems, sales activities also involve GPRS and EDGE.

To show customers the way to the future, the unit also provides information about 3G.

"Mobile Internet will become interesting for our markets, and there is potential here since we can reach customers who do not have access to wireline Internet," says Mats Arnamo.

"Operators are keenly interested in developing applications that are locally adapted, and the Direct Markets unit has a special data communications team working in this area."

Customer confidence is the key

Right now, the unit's most important task is to punctually meet contractual equipment-delivery obligations, thereby building up customer confidence in the unit as a strong supplier. After the past delays, a return to normal delivery times is essential.

Cooperation with Ericsson's market areas and local companies around the world is important for Direct Markets. The unit has particularly frequent contact with the London office.

"United, we're very strong, which makes it extremely difficult for the competition to beat us," Mats Arnamo concludes.

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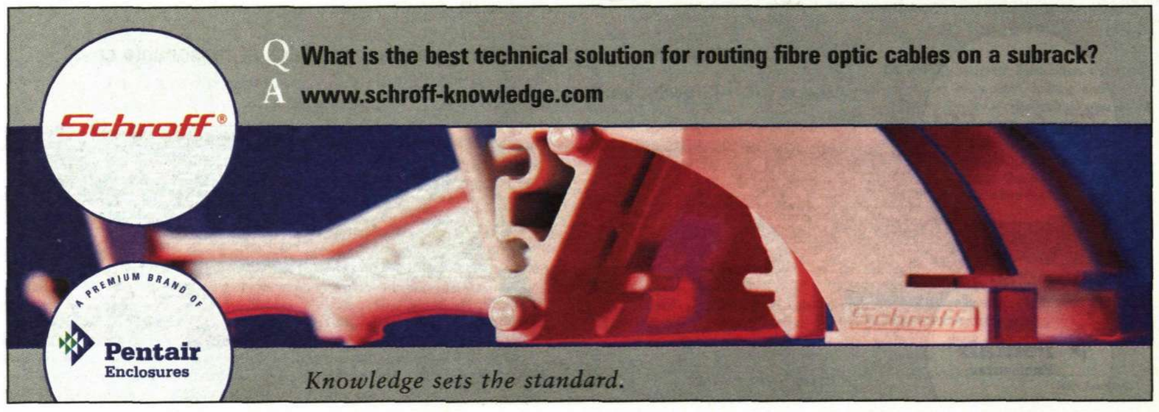
ERICSSON'S LARGEST DIRECT MARKETS




Patrik Andersson, Julia Shcheslavskaya and Marian Bezak are all involved in opening up new markets for Ericsson's mobile phone systems. They work for the Direct Markets unit, which has customers in a hundred countries, many of which are both exciting and out-of-the-way. Photo: Eduardo Valenzuela

Pioneers in young markets

Having the opportunity to initiate and maintain direct customer contact has added a new dimension to their jobs. At least according to Patrik Andersson, Julia Shcheslavskaya and Marian Bezak, who all work at Direct Markets.

➤ "Having direct contact with customers is very stimulating, although it can sometimes involve a great deal of work," says Patrik Andersson, customer project manager for the unit that focuses on Africa, the Middle East and Southeast Asia.

Patrik Andersson is responsible for delivery, installation and operational launching of two GSM systems in Sierra Leone and Congo Kinshasa.

High-risk nations

These may be two small networks but the customer, Mobile System International (MSI), is not insignificant. MSI operates about a dozen networks in Africa – mainly in remote, high-risk nations.

When Patrik Andersson is asked what his job includes, he laughs and says:

"Everything! And I like it that way. I make many of the decisions myself and I take my own initiative since there is much to be arranged on-site and adapted to local conditions. It's both fun and challenging to be the first Ericsson representative in a new country, but it's also demanding."

Misleading media image

Patrik Andersson has been to Sierra Leone several times, and the previously negative image he had received about the country from the media did not fit.

"I've never felt unsafe, but you have to be aware of the risks that exist. Part of my job involves planning security for the installation employees working in the country. Our customer has established a presence in Sierra Leone and we also cooperate when it comes to security."

He says that Sierra Leone could probably be considered one of the more extreme direct markets.

"I like the challenges and the sometimes unusual tasks that arise in the more out-of-the-way markets," he says.

From Moscow to Kista

Julia Shcheslavskaya is a logistics expert whose work involves Sierra Leone, Congo and two other markets in Africa. She came to Sweden from Russia in spring 2000, after a previous position in the logistics area at Ericsson in Moscow for two and a half years.

"I now have greater responsibility and more scope for using my own initiative, which I find very stimulating," says Julia. While she is further from the customers now than when she was working with Russian customers in Russia, she feels that it is easier to work from Sweden since about 90 percent of the logistics routines are established in Kista.

"And I feel that I'm developing in the position I have here," she adds.

Marian Bezak has a sales position at Ericsson's Eastern Europe and Central Asia unit. He worked for Ericsson in Slovakia for three years before coming to Sweden in August this year. "While I don't have the daily contacts with customers here that I had at home in Slovakia, I have a substantially broader field of vision," he observes. Marian's present job allows him to compare "his" market with others and explore new angles in his work assignments, which he believes will be very beneficial for his development.

"At the same time, I can pass on the experience I gain from the close customer cooperation that the local companies have," he explains.

Penetration for mobile telephony has reached 20 percent in Slovakia, which is very high for a Central European country. Eurotel, which is Ericsson's customer, put its GSM network into operation in 1997. Prepaid was introduced last year, stimulating a surge in the number of subscribers.

Gunilla Tamm

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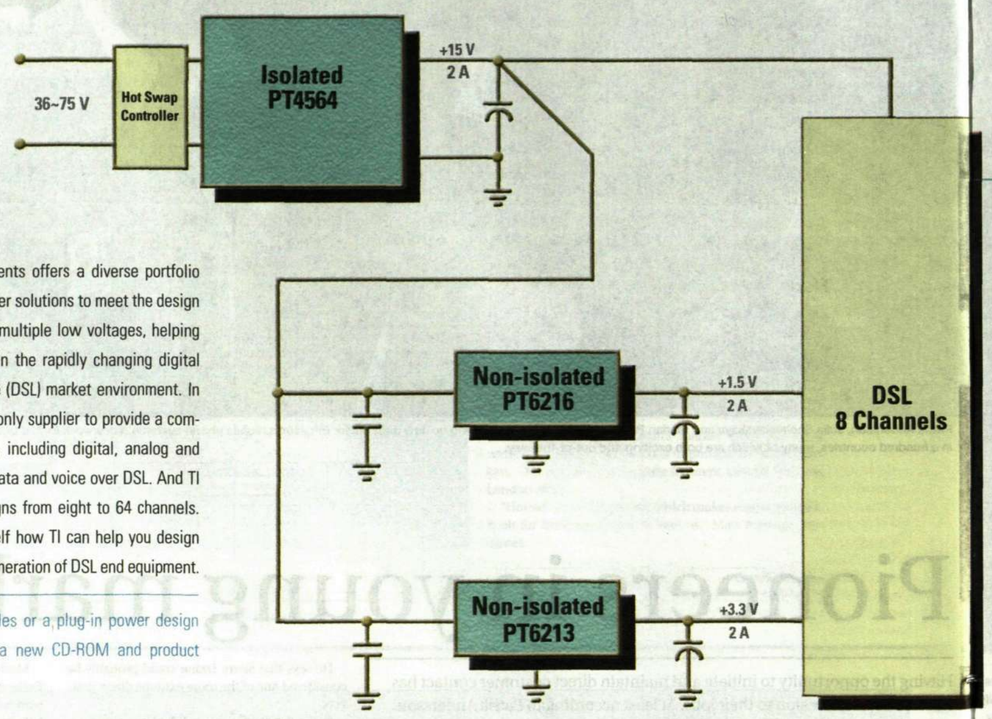

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Comparison of PC Board Area			
Conventional Solution		**TI Solution**	
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Module	*Area (in.²)*	*Module*	*Area (in.²)*
20 W 15 V	*3.3*	*30 W PT4564 15 V*	*3.0*
3-7 W 1.5 V	*2.0*	*PT6213 3.3 V*	*1.0*
3-7 W 3.3 V	*2.0*	*PT6215 1.5 V*	*1.0*
Total	**7.3**	**Total**	**5.0***

**30% smaller footprint*

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2.5 V	*PT6102 PT4201*	*PT6213 PT4128*	*PT6303 PT4128*	*PT6623 PT4566*	*PT7721 PT4482*
3.3 V	*PT6102 PT4202*	*PT6213 PT4121*	*PT6303 PT4121*	*PT6621 PT4561*	*PT7721 PT4482*
5 V	*PT6101 PT4203*	*PT6212 PT4122*	*PT6302 PT4122*	*PT6625 PT4562*	*PT7722 PT4484*
15 V	*PT4124*	*PT4564*	*PT4486*	*PT4486*	*PT4486 + PT4497*

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This year, sales in Mexico are expected to break all previous records. Sales are increasing at a rate of almost one hundred percent. That figure reflects the red-hot telecom market in Mexico, as well as society at large. The strong rate of growth can be explained by a strong economy bolstered by belief in the future and a newfound feeling of confidence following the recent election.

Optimism prevails in Mexico

➤ The taxi driver gestures enthusiastically as he speeds up, hits the brakes, and weaves his way through the unbearable, yet completely normal, morning rush hour on the Periferico, Mexico City's seven-lane throughway.

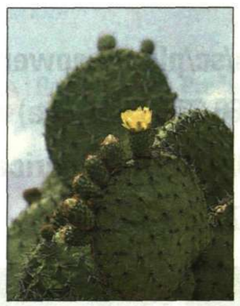
"My entire family voted, as well as all my friends. That has never happened before. Everyone voted for a 'cambio' – a change," he says, braking sharply so as not to crash into the big Chevrolet in front of us.

These days, there is a newfound feeling of self-respect and confidence about the future in Mexico – a feeling that the voice of the people is being heard following the presidential election held this past summer. The resulting change in power was the first for seventy years. Vicente Fox, a former senior executive at Coca-Cola in Mexico, took over control from the right-wing PRI party.

Clear reactions

Reactions to the election result were very clear and completely unexpected. Normally, the Mexican peso falls like a stone following an election. But not this time. The currency has grown stronger, inflation was kept under control and money flowed into the country. Just one week after the election, three international companies contacted Ericsson, all wanting to invest in telecommunications in Mexico.

"This is extremely positive for Mexico as well as for Ericsson. We had a good year in 1999, with a 70-percent increase in sales. This year will be even better, with a sales increase of about 100 percent," says Raul Lucido, Vice President and head of marketing for Ericsson in Mexico.



Difficult years over

No other country in Latin America has experienced so much success in recent years. During the early 1990s, the country experienced positive growth, and Ericsson Mexico was restructured.

Production was cut, the number of employees was reduced and some employees with valuable expertise were loaned out to Ericsson companies in neighboring countries to avoid the risk of losing them to other companies. In December 1994, when Mexico suffered a serious economic crisis, Ericsson was one of only a dozen or so major companies in Mexico that was able to turn a profit, albeit a marginal one.

The effects of the crisis were felt in the region throughout 1995, but the economy was already beginning to recover during 1996, despite the fact that the South American economies were not doing very well.

Boost in mobile telephony

The following year, the telecom market in Mexico was deregulated, giving a further boost to the strong growth in mobile telephony. Mobile phone density has increased from 3.4 percent in 1998 to a forecast figure of approximately 15 percent by the end of this year.

The number of subscribers is expected to show an increase of more than 120 percent in 2000. The trend is also reflected in Ericsson's sales figures for this year. Ericsson Mexico predicts an increase in sales of nearly one hundred percent over its already strong figures a year earlier.

In addition to the strong economy, this increase is due to the Grupo Carso operator group's major drive to expand both the fixed and mobile networks. Grupo Carso plans to invest USD 4.6 billion over an 18-month period from the beginning of this year.

"Free market competition has increased the pace of investment. Now, it is open warfare among competitors. Grupo Carso is making large investments to counter the risk of losing its advantageous position in the market, while the newcomers simultaneously come up with creative new ideas to attract customers," says Raul Lucido.

Major investments

Above all, the big increase in sales can be attributed to major investments in conventional telecommunications.

However, at the same time as both established and new operators are expanding network capacity, the Mexican operators are focusing on new technologies.

Telcel is the first Latin American operator to offer mobile Internet using CDPD packet data technology.

Telmex first

Ericsson's other mobile telephony customer, Pegaso, also offers data services.

Telmex was the first Latin American operator to acquire Ericsson's next-generation multiservice network, ENGINE. Moreover, they have international aspirations for their operations and are already part-owners of local operators in other Central and South American countries.

In other words, today's systems are being expanded significantly while major investments are also being made in those of the future.

No operator wants to fall behind in the race for the next-generation networks, both mobile and fixed.

Clear winner

Ericsson has been the clear winner, although several competitors have entered the market. The explanation behind Ericsson's strong position is partly historical. Ericsson has operated in Mexico since 1904, and was a part-owner of Telefonos de Mexico until 1958. Today, Ericsson controls 70 percent of the mobile systems market, 90 percent of international switches and 61 percent of sales of local lines.

Of course, the interesting question now is whether these figures will drop off or whether the incredible pace of development will continue.

"I believe that the strong growth we have seen will extend into 2001 and 2002. Mexico is, however, largely a shadow economy of the US, so if the American economy slows down, Mexico would feel the effects," says Roland Nordgren, who has been President of Ericsson Mexico for the past year.

There is a clear link to the American economy. Ninety percent of Mexico's exports go to the US, while 90 percent of all imported goods arrive from there. Major investment institutions took note of this interdependence during the spring and upgraded Mexico's credit rating.

Provided the US economy maintains its momentum, Roland Nordgren does not see any clouds on the horizon. With a population of 100 million, Mexico has enormous market potential.

Free trade agreement

Although only 30 million are estimated to be sufficiently well off to afford a mobile phone subscription in the near future, those figures equate to a relatively large country in Europe.

Today, more Mexicans own mobile phones than do all the Finns and Swedes combined.

"The fact that Vicente Fox won the presidential election is also advantageous. He supports continued deregulation of the telecom industry. Increased competition would benefit us".

"Moreover, he wants to invest in small businesses and education. Hopefully, that will mean more people can afford to own a phone over the long term, which would increase the overall size of the market," says Roland Nordgren.

Another positive development is Mexico's ambitions to make itself less dependent on the US.

A free trade agreement has been signed with the EU, and efforts are being made to reach an agreement with the South American Merco Sur free trade region as well.

Mia Widell Örnung
kontakten@lme.ericsson.se

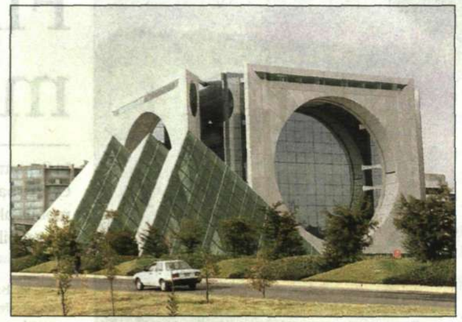
The election during the summer was a watershed. The PRI party lost after 70 years in power. The new President, Vicente Fox, wants to focus on the younger generation and small business. Nearly half of Mexico's 100 million inhabitants are under 20 years of age. They are the future users of mobile services.

Photo: Mia Widell Örnung

Changes for a new image

Cultural revolution?

"Yes, it can definitely be described in those terms," replies Roland Nordgren, who has been describing the changes that will turn Ericsson in Mexico into a modern company for the future.



Ericsson's new offices are located in one of the most spectacular buildings in the new business center in the Santa Fé district of Mexico City. Artwork is displayed on the entrance floor, and the top floor is the headquarters for several hundred Ericsson employees.

➤ Contact caught up with the relatively new company President in his impressive office, furnished in dark leather, at the Ericsson plant in Tlalneplantla, in the north of Mexico City. Soon, however, the old director's office will be only one of Roland Nordgren's two workplaces, since he and a few hundred other Ericsson employees are to move to new office premises in Santa Fé, another district in this metropolis of 20 million inhabitants. Santa Fé is one of the newest and most popular locations in the city, where a number of dot.coms and telecoms have their offices.

Roland Nordgren

"Ericsson Mexico was an extremely well-managed and sound company when I became President last year. The finances and growth were positive. At the same time, I encountered a relatively traditional company," Roland Nordgren relates.

Open landscape

The new premises will be a step toward renewal and a more modern image. The offices are open and bright. The managers' and employees' workplaces will mingle in the open-landscape office.

There will be some glass partitions here and there, but everything is transparent and titles have been removed from the managers' name badges.

Roland Nordgren describes a transformation that is anything but trivial for a traditional engineering sector company in Mexico. This is nothing less than a cultural revolution, covering all aspects, from office design to values and product offering.

"We must move from being an infrastructure supplier to selling total business solutions," he explains.

New units established

For this reason, new units and divisions are being established. A significant step was the formation of the Mobile Internet Institute in Mexico. This began on a small scale in the spring, with a few software developers in the R&D center in Saltillo in northern Mexico.

The Institute is now recruiting more people, who will be based at the office in Santa Fé. In the summer, a new division, Internet Solutions, was formed. (Read more in the article below.)

The new units will collaborate with all the others. Their services will be sold through the established customer contacts and these will be developed in cooperation with other divisions.

There is a need for more interdisciplinary efforts and the previously rather rigid organization is beginning to operate across divisional and unit boundaries to a much greater extent. The traditional hierarchical way of thinking is no longer appropriate.

"In my opinion, this also provides a means of attracting more skilled young people to the company. Young people want to work in creative environments," says Roland Nordgren.

The office in Santa Fé also offers enhanced possibilities for Ericsson to attract top talent. It improves Ericsson's image and a particular advantage is being able to recruit from throughout Mexico City, not only from the northern part of the city, where the old offices in Tlalneplantla are situated.

"We must also bring our salaries into line with the market," continues Nordgren. "We don't want to be attractive simply on the basis of pay, but it is important to pay reasonable salaries to our key personnel, otherwise we risk losing skilled people to our competitors, operators and dot.coms. Options programs are an important possibility that we are already exploiting."

Time-consuming

However, the process of change that Roland Nordgren has initiated will take a long time.

"We can see, in particular, from our dialog survey with our employees, that many of them are confused and don't know where we are headed. As managers, we have a considerable amount of work ahead of us in communicating the changes and offering all of our employees the opportunity to be a part of them

Mia Widell Örnung

Mobile Internet for everyone is his goal

The market potential for mobile Internet service in Mexico is already huge. Rubén Bravo has great expectations for his new job at Ericsson. He came to Ericsson from IBM this past summer and is in charge of the newly formed Internet Solutions Division. He transferred from the computer industry to Ericsson for two reasons.

"Ericsson has an exciting vision, which I really want to help develop – mobile Internet for everyone."

➤ "Furthermore, I was attracted by the balance of traditional and modern in Swedish society. I'm hoping the process will follow the same pattern in Mexico. A modern society, with space for the old Aztec culture," says Rubén Bravo.

Rubén Bravo is convinced that mobile Internet is going to be really big in Mexico.

"There's a huge potential market in Mexico for mobile Internet. Roughly 20 million of Mexico's 100 million inhabitants have relatively strong purchasing power. And they support more than just themselves. We're talking about a very large market.

With better distribution of income across different population groups and better education, the market base will grow even larger," says Bravo. In his mind, it is not a question of if but when.

"It's not my job to encourage the use of mobile Internet in Mexico, that is unavoidable. I'm just there to help make it happen sooner and on a larger scale," he says. Rubén Bravo believes that employees have a very important role to play in the work of spreading the message about mobile Internet.

Rubén Bravo

"It's time we started beating the drum. And I mean really beating the drum," he repeats, stretching out his arms as if to emphasize that this cannot be a halfhearted effort.

50 key companies

"If every Ericsson ambassador chatted for five minutes a day with their friends and neighbors about the mobile Internet, we would already have accomplished a great deal. Of course, we also have to work together with operators, which is something I know we're good at," says Rubén Bravo.

Rubén Bravo's next task is to identify approximately 50 key companies that will turn the mobile Internet into something that people need and want. These include banking services, insurance companies, cinemas, travel agencies and media companies.

"Of the 15 key companies we've contacted so far, 14 of them have said yes to a partnership with us in order to develop mobile services. The 15th said they were already involved in developing a service together with another company."

WAP will victor

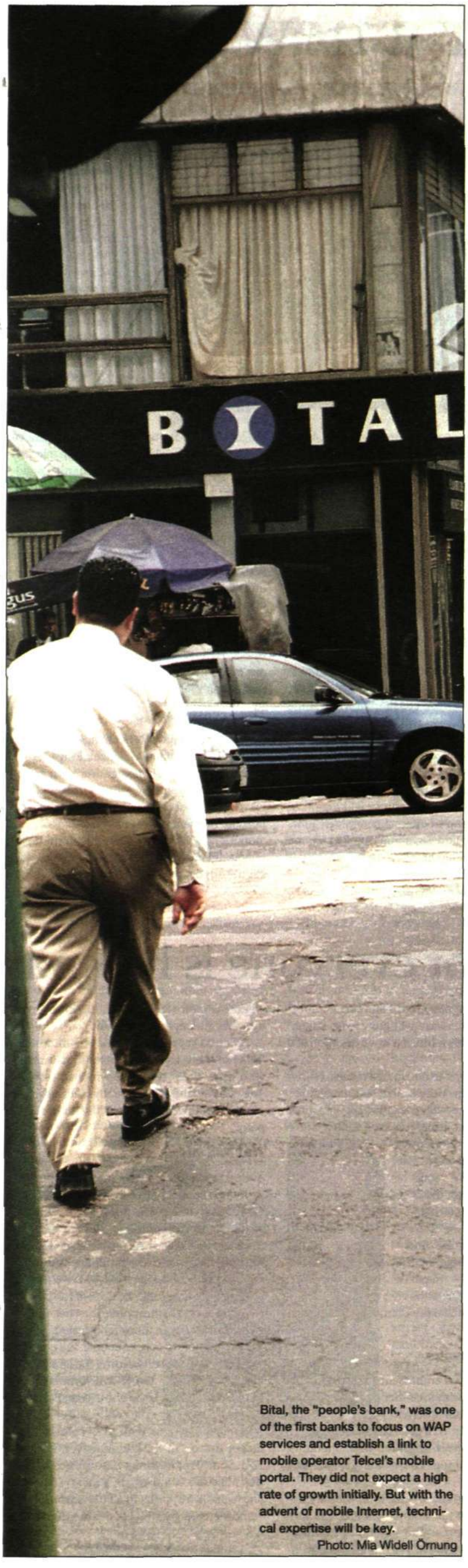
Although customers who have prepaid subscriptions cannot currently receive CDPD services, Rubén Bravo does not view that as a negative factor. According to Rubén Bravo, it would more likely cause problems if everyone were offered the services simultaneously.

"Now, the services can be live-tested properly and by the time large sections of the population gain access to the mobile Internet, the services will have been thoroughly tested."

Another hot topic is, of course, the question of which browser will become the standard in Mexico – WAP or the HDML browser from Phone.com, which is the one used in Ericsson's CDMA phone.

"Initially, I think both will coexist," says Rubén Bravo. "In the end, however, it will be WAP. Some 25 companies have chosen WAP as the Mexican standard, including StarMedia and Avantel. It appears that Phone.com has become increasingly aware of this development."

Mia Widell Örnung



Bital, the "people's bank," was one of the first banks to focus on WAP services and establish a link to mobile operator Telcel's mobile portal. They did not expect a high rate of growth initially. But with the advent of mobile Internet, technical expertise will be key.
Photo: Mia Widell Örnung

First steps toward mobile Internet

In September, Telcel became one of the first operators in Latin America to introduce CDPD-based mobile data services. For a fixed price of between 5 and 30 dollars, mobile phone users can use Telcel's mobile portal and be permanently connected to the mobile Internet.

➤ "We are beginning to learn about data services. First we must offer certain services and see how well they are received, and we must learn how to develop a portal," explains Jorge Gonzalez, technical director at Telcel.

Initially, expectations regarding the pace of growth remain modest. The number of users was small in October and could reach around 60,000 after the first six months.

"It is difficult to give a growth forecast and we cannot be sure when the stronger growth will begin, but when it happens we will have to act extremely fast," says Gonzalez.


Jorge Gonzalez

A key aspect is to resolve the payment question. A fixed charge will not work when very large numbers of people want the service, since this would require an excessive amount of capacity. This applies in particular to prepaid subscriptions, since these account for 90 percent of the customer base.

Two key factors

Development was driven by two key factors: the change whereby the party placing the call pays the call charge and, in particular, the prepaid subscription. It was these developments that really stimulated the growth in numbers of mobile users.

Following the economic downturn of 1995, Telcel determined in a market analysis the following year that there were no additional potential customers for Telcel – people simply did not have the money and were not sufficiently credit-worthy.

"We could not have been more wrong," says Gonzalez. "When we introduced our 'home-made' prepaid solution in April, we thought we would attract about 5,000 customers during the first month. Instead, we got 20,000. The prepaid platform was improved and a new version was purchased externally, then this in turn was replaced with an Ericsson platform.

"This was an essential prerequisite to allow us to grow at the current pace. But we have to improve the stability."

Today, 90 percent of all the functions that exist for post-paid subscriptions are also available for prepaid. And now work is proceeding at full speed to get an SMS solution up and running for prepaid.

This will be an important step in drawing the attention of the large mass market to mobile data services and mobile Internet.

The next step will be to also offer prepaid customers mobile Internet, access to the mobile portal and CDPD. Another key aspect is naturally to keep the portal up-to-date at all times, so that users have access to the types of services they want. Telcel already has a reasonably broad offering on its mobile portal.

Bital is one of the first banks to have linked its mobile banking services to Telcel's portal. The bank has grown rapidly, thanks to its strategy of becoming a "people's bank" and focusing on the mass market.

Rapid expansion

In 1992 the bank had 200,000 customers. Today that figure has soared to 7 million. The bank succeeded in attracting entirely new customer groups. It was a natural move to take the step toward mobile Internet. The strategy dovetailed well with the bank's high-tech, innovative and youth-oriented image.

"It is important for customers to be able to execute the most common banking services, such as checking balances, transferring money and paying bills, wherever they happen to be," says Javier Villazón Salem, head of Internet sales and electronic communications.

Bital regards its investment primarily as a learning opportunity, for both itself and its customers. That is what most banks are doing at present: testing services and learning as they go.

Of the 30 most commonly used bank services, 80 percent are available as WAP services.

"Our expectations are not especially high in the short term," says Tomas Guillermo Gutierrez, who is in charge of financial services. "If we have 100,000 mobile customers within a year, that will be a considerable achievement."

Adding new branches

In the longer term, however, Bital anticipates a strong expansion. The mobile services have the advantage that users do not need a PC, which is an extremely expensive investment for most Mexicans.

WAP services must also be complemented with other technologies, such as SMS, in order to reach as many customers as possible, according to Tomas Gutierrez and Javier Villazón.

Unlike the banks in Sweden, for example, Bital does not see the Internet and mobile Internet as a way of rationalizing and cutting costs – by reducing the number of branches for example.

Bital plans to continue adding new branches, but personal service will be channeled toward the more advanced services, as opposed to bill-paying or salary deposits.

The major challenge in the future will be to develop financial alliances with as many companies as possible, so that customers can pay for a product or service directly via their telephone – paying for a movie ticket at the same time as booking it on the Internet, for example. Such developments may take time, however, since the Mexican economy is still largely based on cash payments.

"There are also two technical issues that it is vital to develop further and inform people about," notes Jorge Sosa Reyes, who is responsible for Bital's technical systems.

"Firstly, payments via the Internet must be secure. Mobile systems and Ericsson's WAP solution perform well in this regard. Secondly, WAP and HDML need to be combined in a joint standard, so that we do not have two separate standards."

Chatting with the President

The Internet companies in Mexico are not quite so modest in their forecasts about mobile Internet.

StarMedia, which has a presence in most Latin American countries, started its operations in Mexico two years ago. The company works with Ericsson on developing mobile services.

"What is needed is services that people demand," says Fernando Alba, President of StarMedia Mexico. "But I think people here in Mexico are now beginning to see the potential of the Internet."

During the presidential election campaign in Mexico earlier this year, the five candidates chatted with voters on the Internet. It was the first time this had happened, and it greatly increased the chances of an open and free debate. People could surf in, vote and air their opinions.

"I believe that within 10 years, 95 percent of the population will have access to the Internet," says Fernando Alba.

Mia Wildell Örnung

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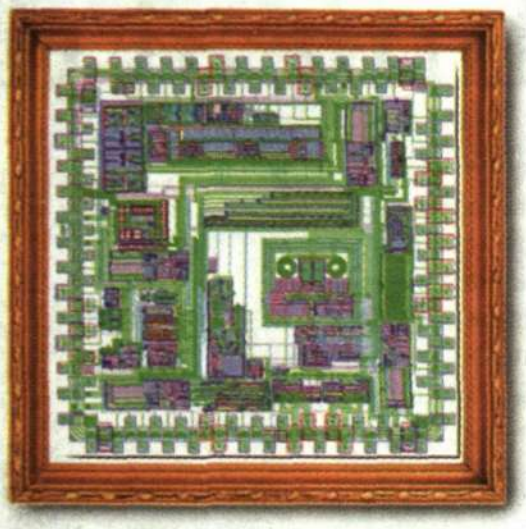

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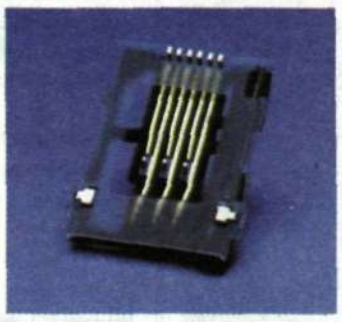
SIM Card Connectors

YAMAICHI Electronics now offer a new SIM Card connector featuring a push-in/push-out mechanism. The series also includes a low profile version (2.3 mm height), with body size barely larger than the card itself. Downsizing was made possible through the development of a locking lid which picks up the SIM Card and ensures optimum contact in mobile devices.



Telecom/Datacom Connectors

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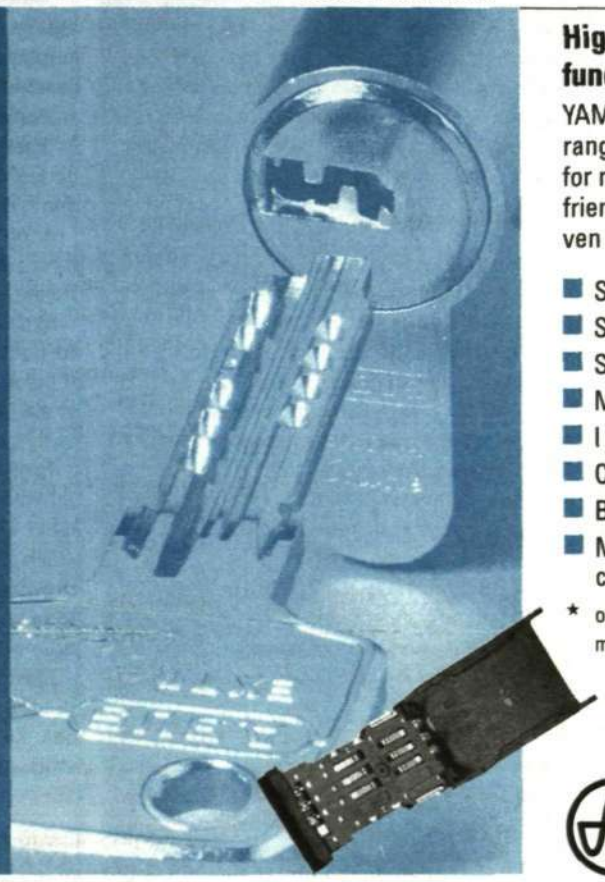

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Demanding Japanese drive technical development

More than half of the Japanese population currently has a cellular phone, and the number is increasing rapidly. Japan is the world leader in mobile Internet, but the country may also be leading the way in providing indoor coverage, particularly in systems that are shared by several operators. This is an area where Ericsson plays an important role.

Graphics: Martin Gradén

➤ Installing special systems for providing indoor coverage has been unusual in the past. The conventional method has been to provide radio coverage in a building by installing outdoor antennas. The quality of indoor coverage has also not been a competitive issue among operators.

Today, as demand among users for better indoor coverage is beginning to increase, the situation is quickly changing. Both NTT DoCoMo and J-Phone have initiated extensive programs for improving total coverage, including indoor areas.

Adding to the picture is that Japanese authorities do not allow operators to install their own antenna systems in public buildings. A single joint system is considered sufficient. Operators have now begun to notice that costs are reduced when systems are shared with competitors, thus paving the way for multi-operator systems.

Shared systems

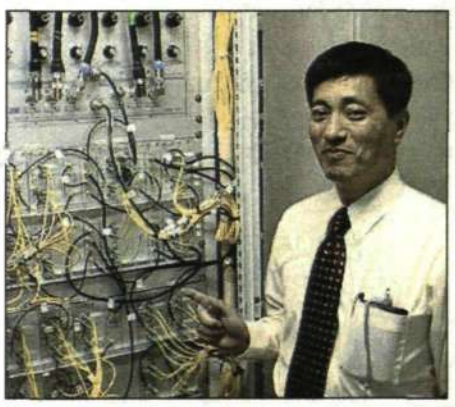
There is an organization in Japan called the Tunnel Association (TA), which is encouraging operators to install multi-operator systems to provide coverage both indoors and in the subway and other tunnels.

One reason is that it is considered important that people are able to use their phones in any location in case of a disaster, such as an earthquake or a typhoon.

Financial assistance is provided by the Ministry of Transport, which can pay a large part of the cost for a multi-operator system in cases where TA has identified an area as particularly important for providing coverage. TA has already contributed to such installations in some 300 locations throughout Japan.

Public demand has also made operators aware that they can compete with each other by providing indoor coverage.

As a result, many public buildings, shopping malls and department stores have recently been equipped to provide very high quality indoor coverage. In this connection, Ericsson Japan, NRJ, plays an important role in installing both passive and active antenna systems.



Massao Ito, product manager at Ericsson's Japanese company NRJ, shows a Local Interface Unit, which converts the radio signal to an optic signal which is then sent out over an optic-fiber network to antennas that cover a very large area. Photo: Conny Dahlfors

Ericsson installations

Ericsson's Japanese company NRJ received its first order for an indoor installation as early as 1997.

That order related to Tokyo Big Sight, an exhibition center in Tokyo Bay, but the system was only for a single operator. Since then, NRJ has installed systems in several locations, including Kyoto's new train station, the JR Central Towers Building (JRCTB) in Nagoya. Both of these systems are shared by four operators using the 800 and 1500 MHz bands.

JRCTB is built on top of Nagoya Station. The building complex consists of a 17-story main building and two towers of 51 and 52 stories, respectively. Floor space totals 410,000 square meters.

The first system in Nagoya was designed to provide coverage of public areas, including a garage and a large department store, as well as in the common areas of the main building from four stories below ground up to the 17th floor.

The first expansion order was received in March of this year, and the system was recently taken into commercial operation. This second system provides coverage in the office areas of the main building, as well as one of the towers. Conventionally, indoor coverage has employed a radiating cable or a network of passive antennas linked to one or more base stations via coaxial feeders.

This is a perfect method when the distance between the coverage area and the base station is not too great.

If, on the other hand, the distance is very great, fiber-optics and distributed antennas are required.

In this case, distances of several kilometers are not a problem, since the output is the same at the antenna port, as long as the optical loss in the fiber is held within certain limits, normally less than 3 dB.

To allow optic fiber to be used, the radio signal from the base station must be converted to light. This is performed by a Local Interface, which is normally installed at the base station. The optical signal is then fed via optic fibers to Remote Units, where it is converted back to a radio signal.

Passive antennas are connected to the Remote Units, which are installed in the coverage area. Each Remote Unit has two RF contacts to which one or more antennas can be connected.

Largest to date

All the systems that Ericsson Radio Access delivers are completely transparent, allowing any operator whatsoever to be connected to the system without compromising any aspect of service quality.

Because it is a broadband system, it also allows several operators to be connected in the same manner as if using a passive system. Overall, the Nagoya project is the largest installation ever for Ericsson using optical distribution to provide indoor coverage. A total of 107 Remote Units are used in the system.

Turnkey system

NRJ's contribution to the project consisted of planning, design and verification using its own personnel from the local region and the main offices in Tokyo and Shin-Yokohama.

Planning and verification was performed using Ericsson's TEMS tools, and with the help of sub-suppliers, a turnkey solution was delivered.

The optical system is manufactured by an Italian company according to Ericsson's specifications. Different versions of the system have been sold via Ericsson Radio Access and local Ericsson companies to customer throughout the world.

Outside Japan, the product name xCELLnt is used.

In closing, it can be noted that discussions have started with J-Phone and NRJ on expanding the system and installing new systems for WCDMA.

Japan will be the first country to deploy WCDMA systems, so this may provide Ericsson with valuable experience that can be used in other countries.

Lars Cederquist

Based on material from Conny Dahlfors and Hans Beijner

Simulated tests eliminate waiting

At Ericsson Infotech in Karlstad, Sweden, engineers are building virtual AXE switches.

The functions of Ericsson's world-renowned switch are being simulated on a standard workstation.

Patrick Carlén and Magnus Einarsson demonstrate a future version of SEA, Ericsson Infotech's simulation tool for AXE that will allow engineers to plug their laptops into a switch and run simulations in the field.
Photo: Niclas Henningsson.

➤ The savings in time are substantial, since software designers do not need to test new software on real AXE stations.

Function testing has long been the bottleneck in the development of new AXE software. Test stations were bulky and expensive.

They required considerable maintenance, and function testers were forced to work three shifts in order to complete testing of new software.

Award winning suggestion

In the mid-1980s, Tord Ivarsson at Ericsson Utvecklings AB built a simple simulator on his computer.

The waiting lines for AXE stations were greatly reduced when software designers were able to use the computer for simple tests.

Tord Ivarsson received an award for the year's best suggestion, and responsibility for the new tool was transferred to Ericsson Utvecklings AB (UAB) in Karlstad.

Flexible toolbox

Since then, the UAB unit in Karlstad has become a part of Ericsson Infotech, and the AXE simulator has been refined considerably.

The latest version is called SEA (Simulated Environment Architecture).

"SEA's greatest advantage is its flexibility," relates Patrick Carlén, marketing manager for SEA at Infotech.

"The current AXE generation, AXE 10, is very complex, and it is difficult to build a single tool that is suitable for all types of simulations. We have therefore designed SEA as a toolbox where the designer or function tester can choose the components that should be used for simulating a particular application," says Patrick Carlén.

SEA users are found at Ericsson units around the world, primarily in groups that are developing new software for AXE, but also in software production, customer support, troubleshooting and training.

Saves time and money

The AXE hardware is periodically upgraded, meaning that Patrick Carlén and his colleagues need to modify the simulators.

"Sometimes we get ahead of the hardware guys at UAB. The simulator is ready before what it is supposed to simulate, but that's only for the good," says Magnus Einarsson.

"Then the software designers don't have to wait for the hardware to test their programs. In developing the APZ 212 30, for example, UAB was able to reduce lead time by months," he explains.

Among the first SEA users

At Ericsson in Copenhagen, some 100 persons are working with software development for AXE Wireline. Thomas Albrink is responsible for the simulated test environment.

"We were among the first SEA users, and for us the gains have been significant," says Thomas Albrink.

"Up until January 1999, we had 15 AXE stations here that were constantly booked. Today we have two. We use SEA for several types of tests, as well as in preparations for system integration."

"People are also a lot less afraid to experiment with different configurations," he continues. "Starting up a big AXE station is always a little nerve-wracking. It's an expensive installation, and no one wants to cause any problems."

Expand the areas

Patrick Carlén and his colleagues are planning to expand the application areas for SEA.

In future networks, AXE will be joined by new types of nodes, including Cello and Telorb, which will increase the need to simulate all or portions of the net to ensure that each connection point really works.

Simulations in the field

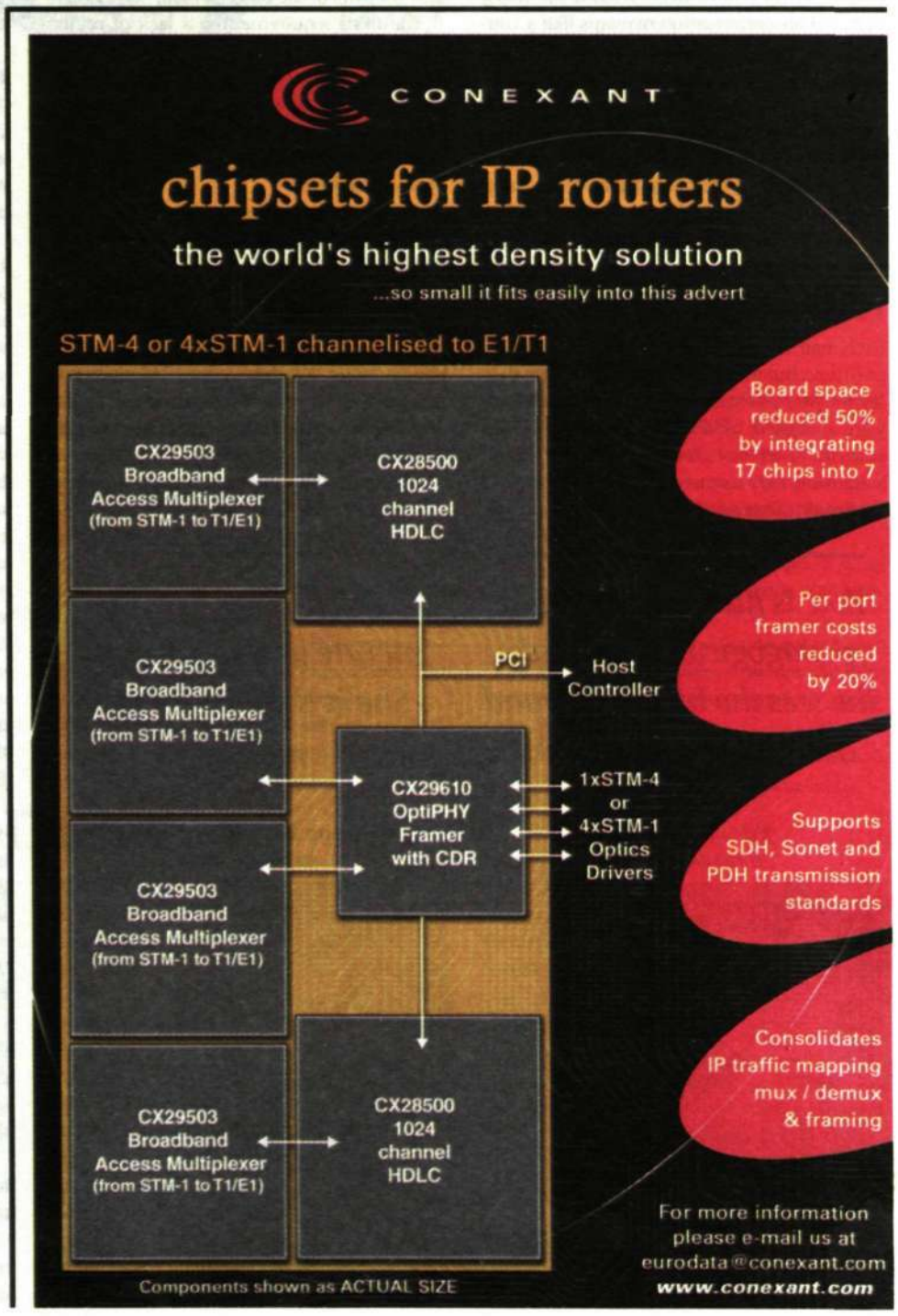
In addition, the simulation architecture can be used to simulate platforms other than AXE, such as Cello and Telorb.

"We are also considering a version of SEA for the Linux operating system," notes Patrick Carlén.

"We currently run under Unix, but with Linux, users can run tests on a PC. That would allow them to take their laptops, connect them to an AXE in the network and run simulations in the field."

Niclas Henningsson
freelance journalist

infotech.ericsson.se/tsp/products/sea



Twice as good

Two women who share one position – Eva Söderlind and Kristin Holmberg – were recently awarded Sweden's Manager of the Year prize. Since a Swedish business publication announced the winners, their days have been filled with interviews and congratulations. A common philosophy, trust and a lack of pretentiousness, is Eva's and Kristin's recipe for a shared managerial position.

➤ *"They have found a way to be managers on their own terms, by successfully sharing one managerial position."*

So read the citation for the Manager of the Year award that Kristin Holmberg and Eva Söderlind received. The two work at Ericsson Process and Application Consulting (formerly Business Consulting). Contact met them in their office a few days after the award ceremony. Their desks were covered with impressive bouquets of flowers and congratulation cards lined their bookshelves.

Eva and Kristin exude enthusiasm and it is clear that they have been friends for many years. Their conversation overlaps like a couple of twin sisters. When one of them starts a sentence, the other can finish it.

They came up with the idea of sharing a managerial position about five years ago. They had worked together on and off since the end of the 1980s, and discovered that it was more fun when they worked together on projects. Above all, their combined work efforts generated better results.

Vision becomes reality

Each had been offered separate managerial positions, but they both declined because they felt the personal costs were too high. Still, they were intrigued by the managerial role, and since they had read a few articles about shared leadership, they came up with an idea.

"People often take for granted that management is the way it is. We came up with a vision," says Kristin.

"Our concept was to be able to work in a fun job with a reasonable workload. And to test new work styles in a hierarchical structure," says Eva.

The idea became reality when their workplace reorganized and all of the positions were reposted. Eva and Kristin applied for a position together and had assembled numerous arguments in defense of what they anticipated would happen. To their surprise, their president, Leif Eriksson, said, "What a great idea!"

"He knew what the advantages and disadvantages of traditional leadership were and felt inclined to try something new," says Kristin.

Kristin and Eva have been "trying" the position out for three and a half years now. They quickly realized that it wold work well and that it was profitable – even though the company actually pays two salaries. There are three basic requirements for shared leadership to work, according to them.

"You have to have the same basic philosophy. If you do, then you don't need to discuss everything under the sun," says Kristin.

"Furthermore, you have to have absolute confidence in each other. Sometimes difficult situations come up, one either fails or succeeds. You also have to rely on the competence and goodwill of the other person," says Eva.

The third requirement is a lack of pretentiousness. You have to be able to share the spotlight and both be happy when you are the center of attention, as well as when you are not.

What are the advantages of sharing a managerial position?

"You become more bold; it's easier to tackle difficult tasks when there are two of you," says Kristin.

"Together, we are more competent, since both of us can contribute our knowledge. And we can undertake larger projects, we're able to handle more. We have more balance, even though we do work overtime when that is needed. But viewed across an entire year, the workload is much better," says Eva.

Employees also appreciate their forthrightness.

"The fact that there are two of us, means that we have to have discussed things together and formulated clear goals, visions and expectations," says Kristin.

Eva is humane, fast and pedagogically inclined. She sees the big picture and can explain it to others.

Kristin on Eva's best traits as manager.

Kristin sees the big picture and is humane. She is thoughtful and patient.

Eva on Kristin's best traits as a manager.

Eva Söderlind and Kristin Holmberg have an understanding with each other like few others do. When Contact asked for Eva's business card she went and retrieved one. Not her own, but Kristin's. "I couldn't find my own," she said. Photo: Alexander Farnsworth

How do you divide up the work?

"We don't have any planning meetings booked in advance, although we do speak to each other every day on the phone in the car on the way to work. We use that time to review what has happened and what is going on," says Kristin.

"Another trick that we have is that we don't have individual papers, everything goes into a joint filing cabinet. If I'm going to a management meeting, I'll take the file for the management group," says Eva.

"When we first started, we spent a few summer days at my cottage, writing up all of the tasks associated with the job and figured out how we would deal with them. We quickly formulated a basic ground rule: anybody could ask either of us about anything. That has been the key, nobody has been met with a response like, 'that's not my area of responsibility,'" says Kristin.

They deal with strategizing and planning, management issues and salary issues jointly. Eva is responsible for finances/administration while Kristin oversees marketing and sales.

"But, in reality, we don't work in such a segmented fashion, so people have gotten used to the fact that sometimes me and sometimes Eva answers questions," says Kristin.

"The only thing we don't do jointly is hold development review meetings. The relationship between employees and their managers has to be long-term, and you can't have two managers sitting in front of one employee," says Eva.

What do you do if you have different opinions?

"Then we fight," says Kristin with a laugh.

"The fact is that we never end up in conflicts, even if people have a hard time believing that," says Eva. "I think it's because we have the same basic philosophy and we respect the fact that we are different as individuals."

"Eva is enthusiastic and prepared to rush towards a goal, while I want to take more time to analyze and think," says Kristin.

The two even spend some of their free time together. While they don't see each other every week, their families know each other well.

Don't you ever get tired of each other?

"No, no. In some ways, its like being with your family, you never get tired of each other," says Eva.

"More frequent is the fact that we need to take a break from work. But then we'll call each other on the weekends and talk about other things," says Kristin.

Could you envision yourself in a managerial position by yourself?

"We know that we are each capable of that, but I would think twice about all the advantages and disadvantages," says Kristin.

"At the moment, I'm a manager and having a lot of fun, but deep down I feel like a consultant. I think that's true for both of us. We're not focusing specifically on managerial careers at this point," says Eva.

What will you do if one of you quits?

"Then we'll both leave the managerial position, we decided that when we took the job. But it would never come as a surprise if one of us wanted to quit, we would talk about that beforehand," says Kristin.

"If it came as a surprise to one of us, then we would quarrel!" says Eva with a smile.

What are the disadvantages of sharing a managerial position like you do?

"There are dangers and difficulties if you don't fulfill the basic requirements. Then everything becomes a big experiment with the employees," says Kristin.

What tips to you have for others who would like to try something similar?

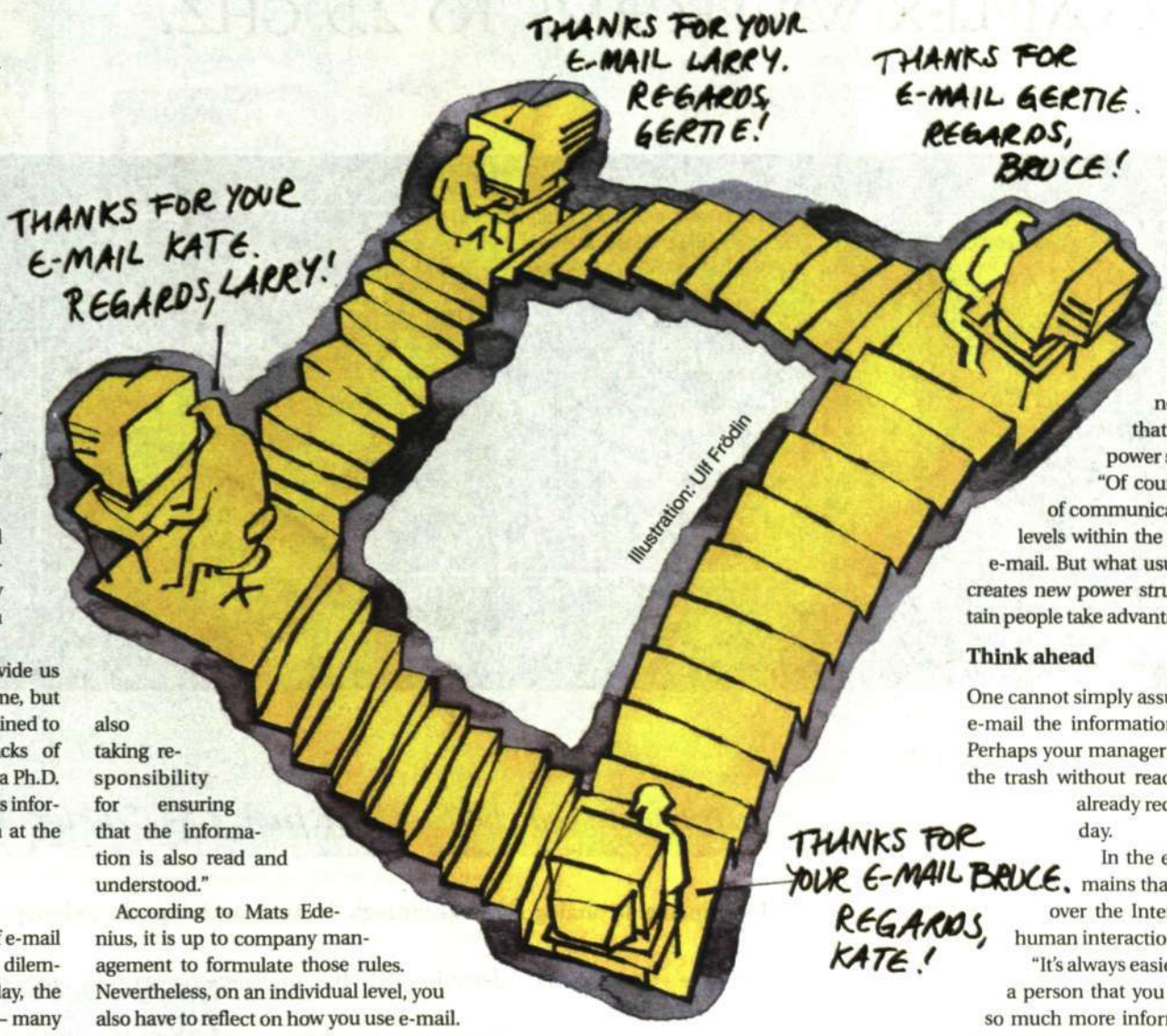
"Talk over important issues and say no if you don't agree. If you are not asked, then you have to take the initiative yourself. We got this job because we dared to ask," says Eva.

"You have to have a vision, and must dare to make it a reality," says Kristin. "As far as we're concerned, I can say that I am proud that we have been able to test our vision here at Ericsson, which is known for schooling the best leaders in Sweden."

Henrika Lavonius-Norén
freelance journalist

Got a handle on your mail?

E-mail has definitely changed the way we work. When it first arrived, people talked about e-mail as liberating, breaking down hierarchies, an all-round time saver. But how does it function today? Have we really become more efficient and liberated?



➤ "Let me just check to see if I've got any e-mail."

Does that sound familiar?

Equally commonplace are the loud sighs of fellow employees whose inboxes are overflowing with inquires they don't have time to respond to, or with undesired chain-letters.

"We thought that e-mail would provide us much more freedom to control our time, but instead many people have become chained to their computers, responding to stacks of e-mail," says Mats Edenius, who holds a Ph.D. in business administration. He conducts information and communications research at the Stockholm School of Economics.

Modern dilemma

When he wrote about the downsides of e-mail in his 1997 book, "E-mail – a modern dilemma," he was labeled reactionary. Today, the tone of debate has completely shifted – many companies and organizations have started to view e-mail as a problem.

Johan Lundkvist, at Ericsson Corporate IT, says that while e-mail is a tool on which the company has become completely dependent, it is also frequently abused.

"Our greatest worry is that we're disseminating too much information to too many people. E-mail is convenient for the sender, but often generates problems for recipients, who risk being drowned in e-mail."

According to Mats Edenius, this has encumbered employees with yet another stressful task to deal with.

"Going through 40 e-mails a day – where many of them are too long, some of them outright unintelligible and most require a reply as soon as possible – does not give people a feeling of being in charge of their own work hours."

Mats Edenius is seeking common standards for how we use our electronic mail.

"We need e-mail ethics! Rules for how we should express ourselves and on what a reasonable response time is, for example. We can't just send off e-mails in every direction without also taking responsibility for ensuring that the information is also read and understood."

According to Mats Edenius, it is up to company management to formulate those rules. Nevertheless, on an individual level, you also have to reflect on how you use e-mail.

"We have to be careful that e-mail does not end up taking control of our lives."

Individuals should definitely reflect over their own behavior and consider whether they instantly turn to their computer as soon as it beeps.

Mats Edenius is not entirely negative, however.

"E-mail definitely has its benefits. Especially since it is not fixed in time or space. But it needs to be used more efficiently than we do today, and people have to realize its limitations. If you are in a hurry, it is much better to just pick up the phone," says Mats Edenius.

"Doing so also has the added advantage of instantly knowing whether the recipient actually understands what has been said."

Having the ability to e-mail back to work from vacation or being able to get up in the middle of the night and transmit one's thoughts as they pop into your head, before they are forgotten, does have its advantages. But always being available also makes our lives more stressful. And since it also means that the ability to work is always there, it is easy to feel pressure to constantly be getting something done – your job follows you wherever you go, 24 hours a day.

"Modern communications technologies are helping to permanently dissolve the boundaries between work and leisure. In some ways, however, we have more freedom, since we don't need to be at work from nine and five."

"On the other hand, we will probably develop a strong desire for work-free zones, where we can be completely free from all the information that engulfs us. We need time for contemplation."

Promotes spontaneity

Another benefit often associated with e-mail is the fact that appearance, language and traditional conventions of dress are of no significance on the Internet.

In that respect, e-mail is helping to put communications on a more equal footing, which in turn can result in flatter hierarchies.

It has definitely become easier to send mail to people at work with which one would otherwise never communicate.

E-mail makes it easier to be spontaneous and less formal in language usage. You can say hello to almost anybody.

Mats Edenius does not, however, believe that it has affected overall power structures.

"Of course there are examples of communication between different levels within the organization thanks to e-mail. But what usually happens is that it creates new power structures, since only certain people take advantage of the opportunity."

Think ahead

One cannot simply assume that by sending an e-mail the information has gotten through. Perhaps your manager throws your letter into the trash without reading it – he may have already received 50 messages that day.

In the end, the simple fact remains that brief electronic letters over the Internet can never replace human interaction.

"It's always easier to communicate with a person that you can see. That provides so much more information. Body language and all those other conventions we make use of actually serve a purpose."

Mats Edenius believes that we should think about what we want to use e-mail for. If used correctly, it can help us to manage our valuable time more efficiently.

Ulrika Johansson
freelance journalist

FACTS/E-MAILING TIPS

1. Be careful about how you formulate your message. Don't be sloppy simply because it is e-mail.
2. Don't use e-mail as a convenient way to pass responsibility on to someone else without following up.
3. Don't feel compelled to reply to every e-mail within a few hours. Make a general decision about what a reasonable amount of time is, for instance two days.

The pros and cons of e-mail

Ying-Jun Mao, Ericsson Simtek Electronics, China

"It's great being able to receive information and have outside contact whenever and wherever you want, without regard to national borders, time zones or distance."

"The worst thing about e-mail is that you can not live without it."

Ade el Sharif, Ericsson Indonesia, Pvt, Indonesia

"The best thing about e-mail is that it is fast and simple. You can use it when you want and it's easy to forward documents."

"Negative aspects include the fact that it is impersonal and that it does not stand out for attention. The messages all look the same until you open them."

Erhan Sayin, Ericsson Telekomünikasyon, Turkey

"E-mail has facilitated our ability to quickly deliver information to the entire company. It has changed our way of communicating in a positive manner. One difficulty is not always being certain that one has addressed the correct person, or whether the person in question prioritizes the matter in the same manner or if he or she will respond."

Anne Axelsson, Ericsson Utvecklings AB, Sweden

"It's nice to be able to send e-mail whenever you feel like it, whether that be early in the morning or late at night. And sometimes it feels easier to e-mail someone you don't know than call them."

"It can be stressful. Especially after having been gone for several days and an awful lot of mail has arrived during that time."

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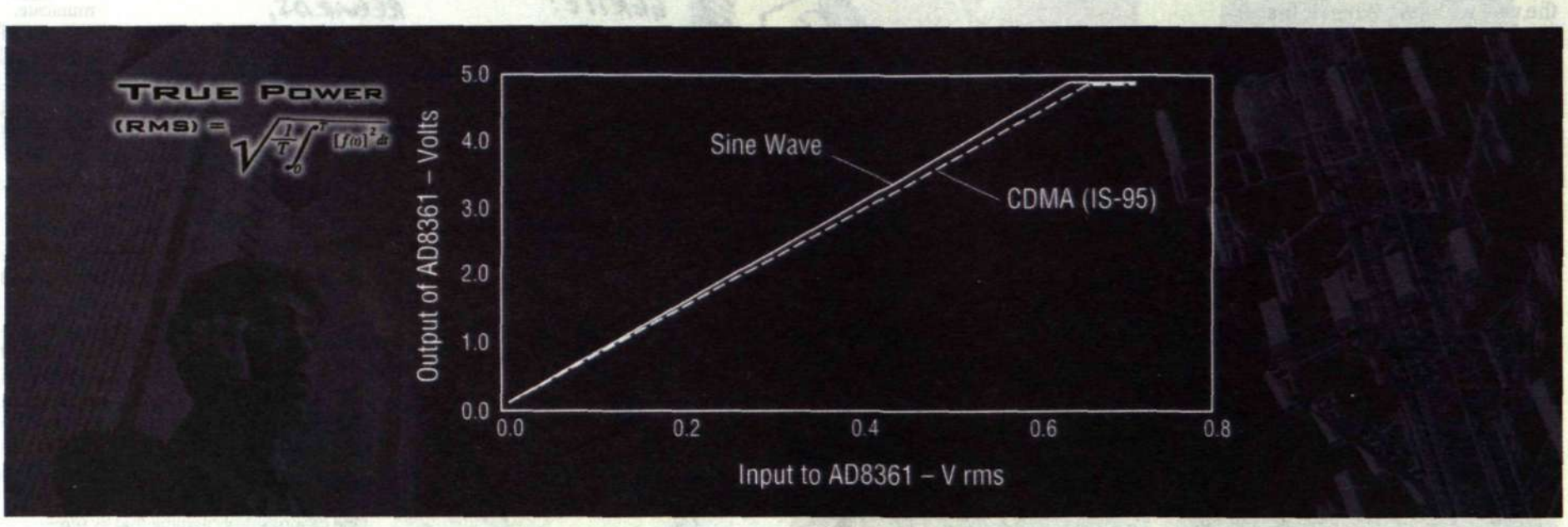

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Let us introduce you to Jean-Christophe Ronzier. Jean-Christophe spends all his time working with Ericsson on behalf of Tektronix. He has many years of experience in test and measurement and would like to share that knowledge and experience with you strategically.

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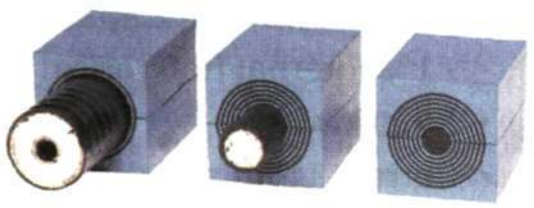

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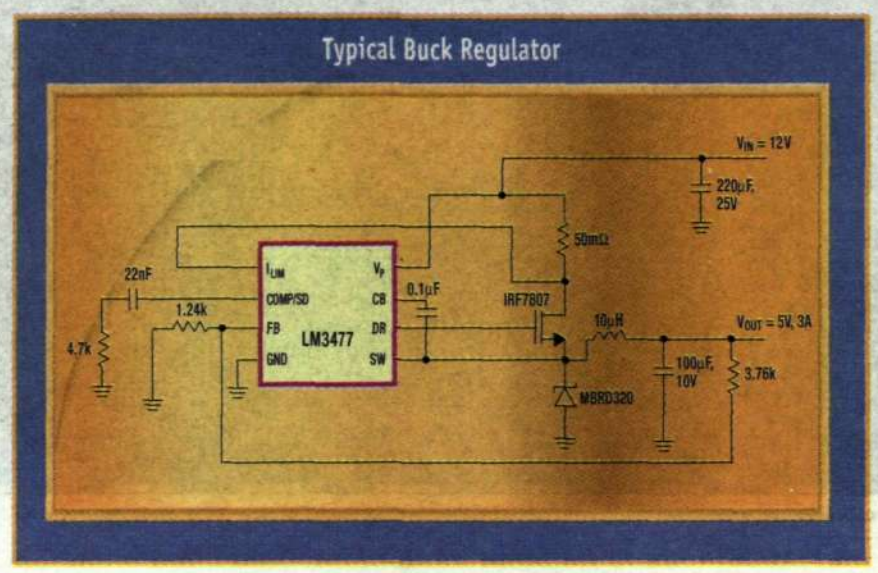
- Internal Softstart
- 8-lead Mini-SO8 package



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National Semiconductor

Tough skins for tough customers

What does Ericsson have in common with Iron Maiden, Rage Against the Machine and the entire Swedish dance-band elite?

➤ The answer: They have the same drum supplier – the British firm Premier Percussion. Of course, Ericsson Microwave Systems does not buy drums, but it does purchase the material, or the so-called skin, used for drumheads. The skin protects the radomes on certain antenna models for the MINI-LINK. With 40,000 units purchased annually, Ericsson Microwave Systems is one of the world's absolute largest drum skin customers. Premier Percussion made its first drum in 1922. In 1994, 72 years later, the first drum skin was purchased by Ericsson .

Niclas Henningsson
freelance journalist

When Iron Maiden's drummer accompanies a Bruce Dickinson song, he is playing on the same drum skins that Ericsson uses to protect its MINI-LINK antennas.

Photo: Pressens Bild/Magnus Johansson

Matthias Hall (left) is pictured with Artak Sarkisian, who was also involved in the project to create WAP phone access to Ericsson's Global Directory.

Global numbers on your mobile phone

➤ It is a simple matter for Ericsson employees in Switzerland to look up the telephone numbers and e-mail addresses of their colleagues worldwide, now that the local company has made Ericsson's Global Directory accessible from a WAP phone.

"If we are going to tell our customers how great WAP technology is, then we have to use it ourselves," explains Matthias Hall, head of IT at Ericsson in Switzerland.

"This service is also highly practical when you are on a business trip or waiting at the airport and need to look up a colleague's telephone number," continues Matthias Hall.

It was the IT unit at the local company in Switzerland that created the WAP service that makes Ericsson's intranet address book accessible via a WAP phone. As soon as the user has found the right phone number, he or she can dial directly. Now the IT unit is continuing to develop the service, with the aim of enabling users to call racom numbers and read Outlook mail on their WAP phone.

"We also plan to develop a WAP version of mobile operator Swisscom's net-based telephone directory and we believe this will attract considerable interest," concludes Matthias Hall.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

ERIC & SON

Åke Persson, President of Ericsson CDMA Systems in San Diego.

Award to Ericsson in San Diego

Ericsson CDMA Systems has been named San Diego's best employer in 2000. The award was presented to CDMA Systems for its "achievements through excellent leadership, which have helped its employees feel valuable and productive."

➤ The award carries significant status in the high-tech hotbed of San Diego. The winner is named by The Society of Human Resources Management (SHRM), a forum dedicated to increasing awareness and understanding for the human resources of private companies and government offices.

The prize is awarded in three different categories, depending on the company's size. CDMA Systems was the winner in the "Large Corporation" class.

Rapid productivity

"Naturally, this award is extremely gratifying, particularly since we have been here only a year and a half," says Åke Persson, President of CDMA Systems in San Diego.

It was in the spring of 1999 that Ericsson, determined to include CDMA mobile systems as a core area of operations, acquired Qualcomm's infrastructure division in San Diego, a unit with about 1,300 employees.

Since then, the company has achieved rapid success in developing several highly competitive products, and Åke Persson says the atmosphere among employees and management personnel is extremely good.

Easier to recruit

In fact, it was a few employees of CDMA Systems who submitted the company's name for consideration by SHRM. In addition to the honor, the award will also facilitate CDMA Systems' future operations.

"First and foremost, it will help us recruit professional personnel. The competition between high-tech companies is extremely tough here in San Diego, which makes skilled technicians a hot item in personnel recruitment programs. As a business executive, therefore, it is definitely a big advantage to spread the news of such a prestigious award," says Åke Persson.

Jenz Nilsson
jenz.nilsson@lme.ericsson.se

No. 19,
November 30,
2000

contact

Ericsson, HF/LME/DI,
Room 811023,
SE-126 25 Stockholm

The entire editorial staff is seen in this picture taken at the newspaper's office at Telefonplan. With five new journalists, the editorial staff is marking the rebirth of the more than 60 year-old publication. Photo: Eduardo Valenzuela

UPCOMING

December 4–9: Ericsson will participate in the Telecom Asia 2000 trade fair in Hong Kong.

December 6: The Global Service Division will launch its global product portfolio in Hong Kong.

December 8: Ericsson's gold medal festival will be held in Globen Arena, Stockholm.

UPDATES

Three key persons have been recruited to work in management positions for the Consumer Products Division.

Ericsson's new R380 mobile telephone was introduced at the Comdex trade fair in Las Vegas.

Executive management plans to implement a new share and option program next year to attract and retain personnel.

Effective January 1, 2001, the Home Communications business unit will be included in the Multi Service Networks Division.

The new Internet protocol known as IPv6 provides virtually unlimited access to addresses to future electronic communications. Ericsson, BT Wireless and SmarTone have conducted successful tests of the protocol in the GPRS networks.

NEW ASSIGNMENTS

Göran Reuterdahl has been appointed Head of Strategic Business Development within division Multiservice Networks (DMN).

Lars Josefsson, Ericsson Microwave Systems, has been named senior expert in the field of Antenna Systems.

Martin Bäckström, Ericsson Radio Systems, has been named Packet Bearer Service expert within Mobile Communications Systems.

Faithful news profile recruits new contacts

The editorial staff of Contact has added several new faces recently. But the goal remains unchanged from the original brief presented in the first edition of the newsletter nearly 62 years ago.

➤ The first edition of Contact in January 1939 started with the following: "When a company grows, it becomes increasingly difficult, unfortunately, for its individual employees to maintain contact with operations outside their own areas of responsibility. The need for a personnel newspaper arises."

This statement still applies today. It has actually become even more important, since Ericsson has grown to include more than 100,000 employees in more than 140 countries.

Contact, however, is more than just an internal publication for Ericsson employees. It is a unique company newspaper that stands alone in its class in Sweden.

To become even better in our quest to provide news and information about what's happening in Ericsson, the editorial staff has now been strengthened.

Five new journalists have joined the staff during the past few weeks: Jesper Mott, Sara Morge, Lars-Magnus Kihlström, Jenz Nilsson and Tonya Lilburn, as well as Ecke Küller, a new photographer. Before the new reporters were recruited, the staff consisted of Gunilla Tamm, Ulrika Nybäck and Lars Cederquist and photographer Lars Åström, supported by Solveig Sjölund, distribution, and Suvi Nurmi, advertising.


Ericsson Kontakten

TIDSKRIFT FÖR TJÄNSTEMÄNNEN VID TELEFONAKTIEBOLAGET L.M. ERICSSON

ANNALAR UT KOMMER DEN

Eric Peterson of Ericsson Review will also join Contact and work with the newspaper's technology pages. Freelance reporter Mats Lundström will continue to keep a watchful eye on world and market news. Maria Paues manages At Work-section.

Lars-Göran Hedin remains as publisher and editor-in-chief. Henrik Nordh was recently appointed senior editor of the newspaper, and Pia Rehnberg will return to her former position as editorial assistant.

Every member of Contact's editorial staff is assigned specific responsibility to cover one division.

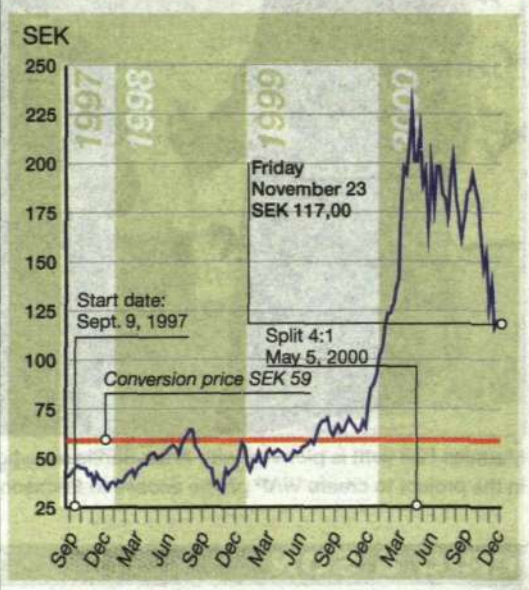
The areas of editorial responsibility are distributed as follows: Gunilla Tamm is responsible for Mobile Systems, Ulrika Nybäck for Consumer Products, Jesper Mott for Internet Applications & Solutions, Sara Morge for Data Backbone & Optical Networks, Lars-Magnus Kihlström for Multi-Service Networks and Jenz Nilsson for Global Services.

The article in the first edition of Contact in 1938 ended with the following two sentences: "You are welcome to submit articles that will increase the newsworthiness of our newspaper. The editorial staff is anxious to receive good stories from everyday operations."

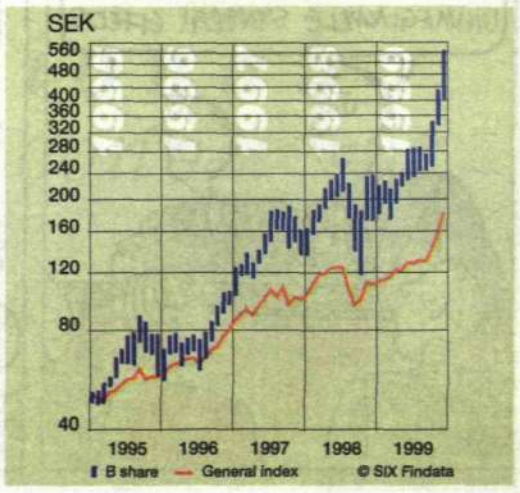
The same holds true for today's Contact. As in the early days, we are dependent on you to make Contact a really good newspaper.

Henrik Nordh
henrik.nordh@lme.ericsson.se

THE ERICSSON B SHARE



An Extraordinary General Meeting of shareholders on September 9, 1997, approved a proposed convertible debenture program. The conversion period extends through May 30, 2003. For additional information, access the website: http://inside.ericsson.se/convertibles



vacancies AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation. They are also published on http://www.ericsson.se/jobs/international.shtml, International Openings, updated every second week.

To advertise: mail your adverts to: employment.adverts@lme.ericsson.se.

Contact No. 19 2000 **Updated November 17**

ERICSSON FRANCE

Chairman

For Product Commitee Business Communication. ESF PU BCSC (Business Communication Solution Center) is located near PARIS and is today composed of 60 people. ESF is one of the 3 entities belonging to the BCSC. We offer integrated networked solution for the entreprises and operators mixing the traditionnal AXE technology with the new telecommunication world. We work in the exciting area of Voice and Data Network integration for the business market, worlwide.

● Job Description: Lead the technical inspections team of the Product Commitee Business Communication for the design documents such as QS, IP, FF. Ensure the technical aspects of the approved solutions described in the documents as well as the integrity of the existing BGC system. Take, after discussion with the technical inspection team, the final decision regarding the approval of the inspected documents.

Verify that clear and detailed Inspection Records are written and stored in the appropriate library within a minimum delay so that all involved parties can access it and refere to it. Initiate system improvement when needed. Responsible for the planning of the PC-BGC sessions together with the list of the documents to be inspected during each session. This includes verification that each document has reached a sufficiant level of quality before to be submitted to the PC BGC body. Ensure that the inspection process is well known within the PU-BCSC so that request for inspection of new documents is received well in advance as well as sufficient technical support is available during the inspections. Publisher of the PC-BGC Web site.

Job Requirement: Excellent background (minimum 3 years) in the inspection and design process. Experience at a similar level (I.E PC-ANT PC-AXE) not needed but appreciated. Technical knowlege in BGC highly appreciated but not mandatory. High analytical skills in order to make a summary of the different opinions in a synthesis direction so that the final decision is facilitated. Judgement, initiative, communication and cooperation are the base for this job. Ability to work under pressure. Cost and planning sensitivity. Temporary overtime due to amount of documents to be inspected in a short periode of time might be needed. Fluent in English speaking and writting.

Contact: Gerard Arnouil, BCSC System Management Teamleader at ESF, +33 1 64 47 54 21, +33 6 72 95 22 75,Gerard.Arnouil@esf.ericsson.se.

ERICSSON TELECOMMUNICATIE B.V., RIJEN, THE NETHERLANDS

Within our Business Line Customer Services unit EGS we have a vacancy for:

APZ Support Engineer (APZ)

Ericsson Global Support (EGS), our support center within the division Business Line Customer Services is having a strategic role within Ericsson's Global Customer Support. EGS is the escalation point for all local support organisations (CSO's) worldwide. EGS makes Ericsson-expertise worldwide available. At this moment EGS gives support on all Public Networks products and is a part of the integrated support organisation for all Ericsson products. EGS is located in 3 different regions (Asia-Pacific (AP), The America's (AM), Europe, Middle-East and Africa (EMEA)) thus 24-hrs support, 7 days a week. We work with normal office hours, where cases are handed over at the end of the day. The activities are executed in an international environment.

● Task description: To handle trouble reports and CSR's, to write emergency corrections, Troubleshooting on testplants and on live site's (sometimes even on-site)

Required competence: knowledge of AXE, minimum 5 year experience on AXE within Ericsson, immune to stress and precise, both working in a team as well as independent, good communication skills in English, prepared to work some weekends, knowledge on MHS, Plex, ASA. Background in: Verification, Testing, Field Support. The home base is Rijen, however there will be the possibility of work and training abroad.

Application: Agnes Brier, HR officer, +31 161 247516

ERICSSON LTD, GUILDFORD

Snr/ Data Transcript Engineers

(ref: 325)

Mark Phillips - Data Transcript Supervisor. The data transcript section forms part of the Operations Services department. The section is responsible for providing all data required for commissioning, integration verification & acceptance (IVA) of new switches, extensions, cellular parameter data for integrating and commission (I&C) of new cell sites, cellular parameter data for optimisation of cellular networks, and implementation of new software / hardware functionality. The data transcript section are responsible for 3 major customers: One2One, Cellnet and ICO.

● The data transcript engineers are responsible for the creation and adaptation of the exchange dependent data (MML) files for AXE systems in all previously mentioned areas. They will be responsible for creating procedural documentation and service level agreements where required and ensuring they are adhered to. They will continuously strive to improve and develop new and existing process. They will actively seek to highlight and develop improvements in data transcript tools. The engineers will be responsible for working as part of a team and maintaining good working relationships within the team and with it's key customers.

Qualifications and experience: Essential; At least 2 years experience of Data Transcript in AXE 10 environment preferably CME20, or other proven testing/switching/support experience. Computer literate. Able to travel within the UK and overseas on occasion. Desirable; Higher technical qualification in telecom, radio or software related subject. Working knowledge of Ericsson procedures and experience in Data Transcript tools development.

Application: myfuture@etl.ericsson.se quoting Ref No: 325 and stating Data Transcript Engineer

ERICSSON MEXICO

Senior RF Consultants. The TDMA Network Consulting area in Ericsson Mexico has more than a year working with Telcel, one of the mayor Operators with Ericsson equipment in the world, delivering Rf Consulting Services for the 800 MHz network. The successful result has lead Telcel to request a further extension of the services for the coming year 2001. Next year's contract will include services for the TDMA 800 MHz., 1900 MHz and CDPD Networks. Telcel's network has more than 10 million subscribers, almost 50 switches and 3,000 cells. We are looking for three different roles:

Regional Project Manager

Team Leader

System Expert

● The successful candidates shall have the following profile: Consultant approach with excellent teamwork and customer relation skills. University degree and fluency in English and Spanish (desired) Operator experience. Minimum 4 years of experience. Main Technical knowledge: RF design, RF optimization, frequency planning, IS136 knowledge, microcell and indoor design, strategic planning. Both 800 MHz. and 1900 MHz networks experience.

The positions offer an excellent opportunity for Engineers wishing to face the challenge of working in a very complex network, into one of the biggest Consulting projects within Ericsson and in a country where the road to 3G will be one of the fastest in Latin America. The starting date of the project is mid January 2001 and the contract length is one year.

Contact: Ariel Pacilio, ariel.pacilio@am2.ericsson.se, +52 21692075, Mobile: +52 54125418

ERICSSON D.O.O, BELGRADE YUGOSLAVIA

Technical Support Engineers

for Mobile Networks MSC/HLR/SCP. Ericsson in Yugoslavia (EYU) was established as a local company 1998 have today 55 employees and is the solid supplier of Mobile system to the 2 Operators on the market, Mobtel and Telekom Serbia.

● We are now looking for Technical Support Engineers who will work to support the AXE nodes and related products as used in the GSM networks. You will support our customer in trouble shooting of problems in supported systems but the most important task, is to help us to build up competence in this area for our young and highly motivated local staff.

We believe your background is B.S in electrical engineering or equivalent and that you have some years support and AXE 10 experience, preferably in the CME 20 SS area and as well knowledge of PLEX/ASA and MHS. An advantage is if you also have experience in APZ/ IOG, IN and PPL.

We'd like to see that you have excellent communication skills and can work in a multinational environment as a team player. If you are interested to work in a young and dynamic company located in an excellent geographical area in Europe, send your resume with references to us.

Project Office Manager, Mobile Network

● We are now looking for a Project Office Manager to our Operations Department.

The main tasks are to manage the GSM implementation projects from initial contract preparation phase to customer acceptance. You will be responsible for planning, tracking and follow up the projects (installation, testing and integration) according to cost, quality and time. A key part of the role is to manage day to day problems so great flexibility, communication skills and teamwork is assumed. You must also have the ability and interest to work with transfer of knowledge to our local staff.

You should have proven track record of managing similar projects or have held a line management position in the Operation area, have at least 3 years of experience in Implementation/ Support/ Maintenance of GSM AXE and related nodes. Further to have experience in Ordering/Logistics issues and broad knowledge about GSM system (MSC/BSC/HLR/SCP/BGW/RBS/ML/OSS/PPL)

If you are interested to work in a young and dynamic company located in an excellent geographical area in Europe, send your resume with references to us

Contact: Pauli Liimatainen, HR, +381 63 247, Divna Vukovic Operations Director, + 381 63 218 034, divna.vuckovic@-eyu.ericsson.se. **Application:** pauli.liimatainen@eyu.ericsson.se.

LM ERICSSON INTERNATIONAL AB, NICOSIA, CYPRUS

Customer Project Manager for GPRS

Ericsson has been contracted by the local PTT, CYTA - Cyprus Telecommunications Authority - to deliver and implement the first phase of a GPRS network. Ericsson is the sole supplier since 1994 of the CYTA GSM System.

● We are now seeking an experienced Customer Project Manager/Total Project Manager for GPRS. Technical understanding and knowledge from GPRS projects is essential.

As the Customer Project Manager you will be responsible for planning, managing and monitoring this important project in terms of time, quality, cost and functionality. You should have several year's experience in Customer Project Management from working directly towards customers.

Ericsson Cyprus(RCY) is a representative office located in Nicosia with 8 people so we very much rely on support from Sweden, Greece and other units.

You would be required to start to work in January 2001 for period between 6-12 months. Duration depending on the completion of the initial phase as well as the need and possibilities to continue with implementing new releases and or expansion of the GPRS network.

Resourceful, flexible, initiative, good communication and cooperation skills and a good ability to work under pressure are important personal qualities.

Contact: Ola Möller, General Manager, ola.moller@rcy.ericsson.se, Anders Ekström. Market Operations Manager, anders.ekstrom@era.ericsson.se, +357 2 591 888, Fax: +357 2 351 443

ERICSSON INDIA

DO YOU KNOW WHICH COUNTRY CONTRIBUTES EVERY THIRD SOFTWARE PROFESSIONAL, GLOBALLY? WOULD YOU LIKE TO WORK IN SUCH AN INTELECTUALLY STIMULATING ENVIRONMENT? LOG ON TO DESTINATION INDIA!

Ericsson has been associated with Indian telecom for over 100 years, since introducing its first product in 1903. Today, Ericsson's digital switching systems handle over 75% of the international calls made through VSNL gateway. Ericsson has installed over 1.2 million lines in India besides supplying telecom infrastructure equipment in the area of switching and transmission to DOT, MTNL and Indian Railways. Out of the 41 GSM networks in India 19 have been established by Ericsson thereby commanding more than 45% of the market share and 80% of Geographic spread of GSM coverage in India. Ericsson's R&D centres in Bangalore and Hyderabad create software for mobile systems, 3G and new technologies as well as internet/IP for use internationally. All these make Ericsson the leader in the Indian telecom Industry.

The market in India is expanding rapidly thus offering tremendous professional challenges. Most of the global leaders amongst cellular operators like BT, Hutchison, AT&T, Singtel etc have their presence in India in ventures with the local operators. You will work with a set of highly competent and committed professionals.

Additionally Indian sub-continent offers opportunities to experience the cultural diversity, long history, a lot of natural beauty, which you will hate to miss. To top it up people here are warm and friendly; English is spoken widely; social acceptability is high, thus making living in India a pleasant experience. And make sure you have a chance to marvel at the beauty of TAJ MAHAL, a wonder of the world. For our expanding business in India we are looking for:

IN Expert

● Main responsibility of this position will be to manage co-ordinate and participate in investigations and trouble shooting at the highest technical level for a major market of IN services. Services like PPS, PPL, MVPN are currently/will be running in the market. This position requires the person to provide technical assistance to transfer knowledge to engineers. The job will also involve travelling in India.

Competence requirements: Minimum two years working experience on IN systems, experience on AXE 10,SMAS, SDP & PPS is highly desirable. The candidate should have good English skills (both spoken/written) and be highly customer oriented.

SS Expert Support Engineer CME20

● Main responsibility will be to manage co-ordinate and participate in investigation and troubleshooting activities in the SS area at highest technical level and to address customer's expectations/needs. Provide technical advice, assistance and transfer knowledge to the engineers. You also need to participate in 24-hour emergency support periodically. IN and pre-paid experience is desirable. The job also involves travelling in India. Competence requirements: Minimum four years working experience on AXE 10 Application systems plus minimum 2-3 years

CME20 and or CMS40 systems, preferably verification/support and you have excellent trouble shooting skills. The candidate should have good English skills (both spoken/written) and be highly customer oriented.

Contact: Neelam Kataria, Officer Recruitment, People and Culture, +91-11-6701538, Fax +91-11-6187878, neelam.kataria@eci.ericsson.se.

ERICSSON AUSTRIA AG

For our Regional Office CEMEA, department Product Introduction & Approval we are looking for an eperienced

System Engineer MD110

● Tasks: To assure product readiness from a technical perspective per market within the region. Technical support in product introduction process. 3rd level technical support during product lifecycle. Market Adaptations Application System support. Field trial and validation execution. Product localization and verification. 3rd party products integration test. Software adaptations for Customer Specific Requirements. Customer technical staff training.

Requirements: Deep technical competence in MD110. High level trouble shooting skills. Programming skills. Technical support experience. Experience in function verification and testing. Customer oriented. Good English skills (Easteuropean languages knowledge is welcome). Readiness to work within an international organisation. Readiness to travel. Ability to work under pressure.

Contact: zdravko.gilic@sea.ericsson.se

ERICSSON TELECOMMUNICATIE B.V., RIJEN, THE NETHERLANDS

Within our Business Line Customer Services unit EGS we have a vacancy for:

Front Office Administrator

● Goal / challenge: Ericsson Global Support (EGS) within the division Business Line Customer Services is having a strategic role within Ericsson's Global Customer Support. The EGS is the escalation point for all Local support organisations (ELS'S) world-wide. The EGS makes Ericsson-expertise world-wide available. The EGS is an integrated 2nd line support organisation for all Ericsson products. The EGS has 3 hubs (front offices) in three different time zones (Holland, Canada and Australia) which makes them able to give 24-hrs support, 7 days a week. The activities will be executed in an international environment.

As a Front Office Administrator you are handling & routing the customer calls and CSR's to the right competence centers in the world. Challenge is to develop a strong customer focus and get to know the Global Ericsson Support Organisation. You will have the possibility to develop yourself in this fast growing organisation and become for example an outage manager. You will be working in a dynamic and international environment.

Tasks: Helpdesk and consultation, Register CSR's from customers, Dispatch to the correct competence center / Emergency handling, Chase CSR handling to ensure closure before due date, Reporting on outstanding CSR's for customers, Support progress reporting. Required competencies: Education MBO level (MTS), Interest in technical procedures, Strong customer focus, Team spirit, Good communication skills in English. Initiative, diplomatic and flexible. The home base is Rijen. However work abroad for both work and training is one of the possibilities.

Contact: Lars Andersson, Duty Manager, ext.2254 or Liselore Brabers, Customer Care Manager, ext 9991. Ref. vacancy no 118094.

Customer Service Specialist (GCSO)

● Goal / Challenge: The Global Customer Service Office (GCSO) within the division Business Line Customer Services has a leading role within Ericsson's Global Customer Support. The GCSO is the single point of contact for Global Operators to raise Customer Service Requests to Ericsson. The GCSO has 3 Hubs, located in three different time zones (The Netherlands, United States and Australia) which enables continuous 24Hr support to Global Operators therefore, all activities are being executed in an international environment. Our organization is characterized as challenging, dynamic, progressing and provides excellent opportunities for personal development.

Tasks: We are looking for two Customer Services Specialists who will be responsible for: Managing both internal and external relations from a technical point of view. Support of customer networks to ensure optimum functionality of sold services. Solving Customer Service Requests (CSRs) reported by the customers. Monitoring and follow up of service requests escalated to second and third line support organization. Advising Customer Service Managers regarding services. Reporting to the customer about delivered services. Guiding of both trainee and less experienced colleagues (mentorship).

Required Competence: Knowledge of AXE, 5 years experience on AXE within Ericsson as a SW trouble shooter, able to work under pressure, attention for detail, team player and has good communication skills in English. The home-basis is Rijen.

Contact: Andrew Massie, Resouce & Duty Manager, +31 161 247216 or Agnes Brier, HR Officer, +31 161 247516.

Within the Business Line Customer Services, department Network Management we have a vacancy for:

UMTS Radio Planner

● Goal / challenge / tasks: As a UMTS Radio Planner you are responsible to support our customer in the Operation & Maintenance activities for the UMTS service. In this role you must be approachable for the customer and be able to translate problems of the customer into technological solutions.

Required competences: Experience in Mobile Networks (GSM / WCDMA/ TDMA). Experience in Mobile products (RBS / RNC / BSC / Mini-link). Experience with Radio or Cell Planning is an advantage. Helicopterviewing in locating problems. Good communication skills in English (Dutch is a plus).

Contact/Application: Loet Pessers, Manager Operations, BL Customer Services, +31 161 249200.

TELEFONAKTIEBOLAGET LM ERICSSON SAUDI ARABIA BRANCH

GSM Trainers

In our new training centre in Riyadh we are providing approx 40 000 studentdays per year. Our core staff need to be increased with two very strong and experienced trainers to meet our customers expanding need of primarily GSM but in some extent Data Com. training.

For this we need at least two new trainers: General GSM/Data Com.trainer with competence in 3G/IN area. GSM OSS trainer preferably with OSS administration skills.

Contact: per-arne.lundberg@tks.ericsson.se. **Application:** bo.lorentzon@tks.ericsson.se

ERICSSON LATVIA SIA - RIGA, LATVIA

Ericsson is a well known trademark in Latvia since the beginning of the century, and the first switch was delivered to Latvia already in 1890. Ericsson established a representative office in Latvia in 1993 and the local subsidiary was founded in 1998. Ericsson Latvia SIA is looking for

Key Account Manager, Lattelekom

Lattelekom is our customer since 1997. The fixed network operator is constantly investing in upgrading of the existing network as well as offering of new services.

● The KAM will be responsible for fulfilling the existing commitments from Ericsson, as well as introducing the customer with new solutions to expand the existing network and to offer new services. The KAM will report to the President of Ericsson Latvia and work closely with the DMN organisation.

Competence requirements: Telecom/datacom experience of at least 5 years. Background in marketing and sales. Good command of English, both written and spoken. Excellent interpersonal skills, sociable, outgoing personality.

Contact: Hakan Johansson, + 371 7090002, Anders B.Jonsson, +46 8719 8617. **Application:** Ieva Jaugiete, +371 7090004, ieva.jaugiete@ell.ericsson.se

ERICSSON RESEARCH CANADA, TELORB DEVELOPMENT ORGANIZATION

Wanted in Montreal: TelORB fans to LMC

TSP is Ericsson's platform for 3G Service Networks (examples of applications are AAA, DNS, e-commerce). TSP together with the Jambala Application Layer is already in use by several applications, such as HLRs, ACs, and SCP services, in the Jambala product portfolio. TSP provides the infrastructure for the system and the applications are coded in C++ and Java. TelORB is the key component in TSP. TelORB is a truly distributed operating system including middleware, e.g. a distributed DBMS, with extremely high availability, scalability, and real-time characteristics.

● We are now establishing a sister organization to the Stockholm office in Montreal for TelORB and TSP development. We are looking for competent and self-reliant designers and consultants with several years of programming skills in C++ on UNIX (Linux and/or Solaris).

Contact: Margot Tischbierek Gyllerup, Margot.Tischbierek-Gyllerup@lmc.ericsson.se, +1-514-345-7900, ext. 5265. **Application:** +1-514-345-7900, ext. 6406 June McLellan, recruiter.

ERICSSON LTD (UK)

Customer Solutions Manager X 3

● Supporting the Account Manager, you will be the main NPN technical point of contact towards the customer. You will develop and promote Ericsson solutions and also provide responses to technical customer enquiries which will include RFI's (Request for Information) RFQ's (Request for Quotations) and ITT's (Invitation to Tender)

Having the ability to identify, establish and interpret customer technical requirements, you will sign off the technical content of offers and orders as feasible and achievable. You will develop and present technical solutions to both customers and prospective customers, identifing new product opportunities and proactively gather market intelligence and feedback towards Marketing and Product Units.

You must have a thorough understanding of Public Telecommunications Networks, methods of service deployment including 'Network Intelligence' products and internodal signalling systems, an appreciation of system characteristics is essential and understanding of Internet access delivery will be a distinct advantage.

In addition, you must be articulate, and have excellent verbal and written communication skills, be presentable to potential customers, inspiring confidence in New Public Networks and Ericsson as a whole. Candidates should be educated to degree level in a technical subject, with at least five years in a comparable technical.

Application: myfuture@etl.ericsson.se quoting Ref: 410. Recruiting Manager: John Bancroft.

ERICSSON NIPPON K.K, JAPAN

3rd Generation WCDMA/IMT-2000 OPPORTUNITIES IN JAPAN. In order to meet the challenges presented by the deployment of a 3rd Generation UMTS/IMT-2000 Network in Japan the IMT-2000 Integration Unit (NRI/SW/I) within Nippon Ericsson is looking for a number of highly motivated and talented engineering personnel. The majority of these positions are based in Shin Yokohama, however some positions may be based in other locations within Japan.

All positions require a strong customer focus and the successful candidate should be able to work well within a team environment and be able to work with people from a large range of cultural backgrounds. English fluency is essential. For further details regarding Nippon Ericsson K.K please visit the web-page at: http://inside.jp.aa.ericsson.se

System Support Engineers

● Radio Network and Applications. The successful candidates shall be responsible for providing integration, configuration and software system support during the deployment of the IMT-2000/UMTS network and then provide first line software technical support for the network whence it is in service.

The applicant is required to have at least 3-5 years experience in integration, system support, verification or design role in the mobile telecommunications, preferably in the radio networks, Radio Base Stations and Controllers or/and in the Datacom arena (like TCP/IP networking and Router configuration, ATM, GPRS Support nodes). These positions offer an excellent opportunity for engineers wishing to move into the IMT-2000/UMTS, WCDMA field and a number of vacant positions are now open.

Training as required will be provided and some overseas and domestic travel may be necessary. There may also be a requirement for some engineers to be available at times on an emergency support/on call roster.

Contact: kasem.mohamed@nrj.ericsson.se, +81 45 475 4482, Fax: +81 45 475 4350.

NIPPON ERICSSON K.K.

STAFF WANTED!!!!!!

MXE Field Support/ Project Engineer

● Are you interested in joining our team and become a Samurai in the field of voice messaging in Japan? Our location is in Yokohama close to Tokyo. We have three customers to support, so travel in Japan to visit them is essential.

Your responsibilities include: Project management and field support of the MXE voice mail platform. You should be able to do MXE Trouble shooting and Major Disturbance Report technical writing. You are also interfacing with product management.

Requirements: 2 years of experience in field support of the MXE, you are prepared to work under stress when required. Knowledge of UNIX shell script design and troublereport handling is expected. You have good command of the English language.

Contact: Hans Hammar, +81 45 4775731, Hans.Hammar@nrj.ericsson.se.

Advanced O&M Engineers

● Opportunities at NRJ System Support in Japan. For the successful candidates who join us in the Support/O&M activities of CMS30 at NRJ/SF System Support we can offer you the benefits of participating in our competence development program that offers you the opportunity of achieving the new Ericsson Datacom certification, your guarantee of a role in Ericsson when the New Telecoms world arrives.

We presently have vacancies for experienced Field Support Engineers in the areas of Advanced O&M. Further to these areas we are establishing support activities for new products such as Packet Data, Datacom and Mobile Internet applications and all participating engineers in the competence shift program are encouraged to join us in this work. Excellent conditions (salary, housing, international schooling, etc) and most importantly, the above mentioned development plan.

The whole world is eagerly awaiting the arrival of a new Telecoms dawn in the land of the rising sun, so why not be there when it arrives and reap the benefits of both worlds.

IN Support Engineer

● We presently have vacancies for experienced Field Support Engineers in the area of IN.

Further to this area we are establishing support activities for new products such as Packet Data, Datacom and Mobile Internet applications and all participating engineers in the competence shift program are encouraged to join us in this work.

Excellent conditions (salary, housing, international schooling, etc) and most importantly, the above mentioned development plan.

Radio (MBS/MRS/BS)

● We presently have vacancies for experienced Field Support Engineers in the area of Radio (MBS, MRS, BS).

Further to this area we are establishing support activities for new products such as Packet Data, Datacom and Mobile Internet applications and all participating engineers in the competence shift program are encouraged to join us in this work.

Excellent conditions (salary, housing, international schooling, etc) and most importantly, the above mentioned development plan.

APT/Switching Engineers

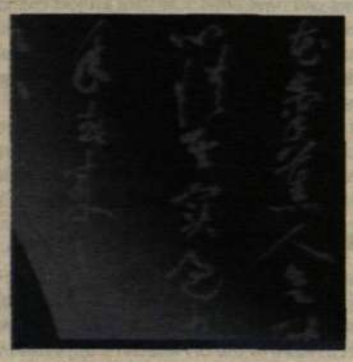
● We presently have vacancies for experienced Field Support Engineers in the area of APT/ Switching. Further to this area we are establishing support activities for new products such as Packet Data, Datacom and Mobile Internet applications and all participating engineers in the competence shift program are encouraged to join us in this work. Excellent conditions (salary, housing, international schooling, etc) and most importantly, the above mentioned development plan.

APZ & IOG Support Engineers

● We presently have vacancies for experienced Field Support Engineers in the areas of APZ, IOG. Further to this area we are establishing support activities for new products such as Packet Data, Datacom and Mobile Internet applications and all participating engineers in the competence shift program are encouraged to join us in this work.

Excellent conditions (salary, housing, international schooling, etc) and most importantly, the above mentioned development plan.The whole world is eagerly awaiting the arrival of a new Telecoms dawn in the land of the rising sun, so why not be there when it arrives and reap the benefits of both worlds.

Do you want to work in one of the most challenging and interesting countries within the field of telecommunication?



Taiwan Network Design and Performance Services is now looking for interested professionals to work within the following teams:

- *Radio Network Design*
- *Radio Performance Improvement*
- *Core Network Design and Performance Improvement*
- *Transmission Network Design and Performance Improvement*

Taiwan Network Design and Performance Services is a new service delivery unit being built in the Asia Pacific (AP) region. The delivery area will primarily be Taiwan but alsothe AP region if necessary, in order to maintain competence and to support other markets in need. The design teams will be largely involved in supporting KAM's and NAM's in the 3G/WCDMA license bids and tenders. The performance teams will deliver services in the field of both 2G and 3G. We have a challenging but also very interesting task ahead of us to build up the service delivery organization and we are now looking for interested professionals to join us. Ericsson Taiwan wants expertise in both team management and related Network Design engineering. Emphasis will be put on knowledge transfer and to coach the teams to become high-end service providers.

We are located in Taipei and are working with one of the most rapidly expanding markets in the Asia-Pacific region. Taiwan has leading edge operators on a deregulated market competing with the latest applications and services. FOA trials are common and pre-releases of software and demo solutions are seen as a necessity from our customers to enable them to stand up to the competition. A WCDMA container demonstration has just concluded that enabled all current and prospective customers to get a "taste" of the New Telecoms World just around the corner. In short, it's all happening in Taiwan !

For Ericsson Taiwan to be able to meet these challenges we are now searching for expertise in the following positions:

Radio Network Design Manager

You will co-ordinate and handle competence build up of a group of 10 to 15 Radio Network Design engineers. The team will specialize on radio network design of 3G/WCDMA systems but will also deliver high-end services within the GSM design field such as high capacity design solutions and methodologies. Services will cover design activities for pre-sale, implementation and post-sale. We are now looking for a candidate with skills in management and knowledge transfer and who has expertise in radio network design to lead this team.

Radio Network Design Engineers

You will work in a team with 10-15 Radio Network Design engineers. The team will specialize on radio network design of 3G/WCDMA systems but will also deliver high-end services within the GSM design field such as high capacity design solutions and methodologies. Services will cover design activities for pre-sale, implementation and post-sale. We are now looking for candidates with skills in know-ledge transfer and who have expertise in radio network design to act as mentors in the team.

Radio Network Performance Improvement Manager

You will co-ordinate and handle competence build up of a Team of around 4 Radio Network Performance Improvement engineers. The team will deliver Radio Network Performance Improvement services for GSM and, in not too distant future, 3G/WCDMA networks. The task will consist of making/delivering presentations of our services, coordinating employee training paths, transfer of knowledge and on the job training. Emphasis will be put on building the competence within the Team. We are now looking for a candidate with skills in management and knowledge transfer and who has expertise in radio network performance improvement to lead this team.

Radio Network Performance Improvement Engineers

You will work in a team of around 4 Radio Network Performance Improvement engineers. The team will deliver Radio Network Performance Improvement services for GSM and, in the not too distant future, 3G/WCDMA networks. The task will besides delivering services, consist of being a mentor for the team, making/delivering presentations of our services, transfer of knowledge. Emphasis will be put on building the competence within the team. We are now looking for candidates with skills in knowledge transfer and who have expertise in radio network performance improvement to act as mentors in the team.

Core Network Design and Performance Improvement Manager

You will co-ordinate and handle competence build up of a Team of 8 to 10 Core Network Design and Performance Improvement engineers. The design work will include new designs for new 3G/WCDMA license operators as well as helping GSM operators to migrate to 3G/WCDMA solutions and to expand their current GSM systems. Services will cover design activities for pre-sale, implementation and post-sale. The performance improvement services will be delivered to our GSM operators and, in the not too distant future, 3G/WCDMA operators. The task will consist of making/delivering presentations of our services, coordinating employee training paths, transfer of knowledge and on the job training. Emphasis will be put on building the competence within the team. We are now looking for a candidate with skills in management and knowledge transfer and who has expertise in core network design and performance improvement to lead this team.

Core Network Design Engineers

You will work in a team of 8 to 10 Core Network Design and Performance Improvement engineers. The design work will include new designs for new 3G/WCDMA license operators as well as helping GSM operators to migrate to 3G/WCDMA solutions and to expand their current GSM systems. Services will cover design activities for pre-sale, implementation and post-sale. The task will besides delivering services, consist of being a mentor for the group, making/delivering presentations of our services, transfer of knowledge. Emphasis will be put on building the competence within the team. We are now looking for candidates with skills in knowledge transfer and who have expertise in core network design to act as mentors in the team.

Core Performance Improvement Engineers

You will work in a team of around 8 to 10 Core Network Design and Performance Improvement engineers. The performance improvement services will be delivered to our GSM operators and, in the not too distant future, 3G/WCDMA operators. The task will besides delivering services, consist of being a mentor for the group and transfer of knowledge. Emphasis will be put on building the competence within the team. We are now looking for candidates with skills in knowledge transfer and who have expertise in core performance improvement to act as mentors in the team.

Transmission Network Design and Performance Improvement Manager

You will co-ordinate and handle competence build up of a group of 8 to 10 Transmission Network Design and Performance Improvement engineers. The design work will include new designs for access and backbone network for new 3G/WCDMA license operators as well as helping GSM operators to migrate to 3G/WCDMA solutions and to expand their current GSM systems. Services will cover design activities for pre-sale, implementation and post-sale. The performance improvement services will be delivered to our GSM operators and in the not too distant future, 3G/WCDMA operators. The task will consist of making/delivering presentations of our services, coordinating employee training paths, transfer of knowledge and on the job training. Emphasis will be put on building the competence within the team. We are now looking for a candidate with skills in management and knowledge transfer and who has expertise in transmission network design and performance improvement to lead this team.

Transmission Network Design and Performance Improvement Engineers

You will work in a team of around 8 to 10 Transmission Network Design and Performance Improvement engineers. The design work will include new designs for access and backbone network for new 3G/WCDMA license operators as well as helping GSM operators to migrate to 3G/WCDMA solutions and to expand their current GSM systems. Services will cover design activities for pre-sale, implementation and post-sale. The performance improvement services will be delivered to our GSM operators and in the not too distant future, 3G/WCDMA operators. The task will besides delivering services, consist of being a mentor for the group and transfer of know-ledge. Emphasis will be put on building the competence within the team. We are now looking for candidates with skills in knowledge transfer and who have expertise in transmission network design and performance improvement to act as mentors in the team.

Are you interested to take the challenge?
Mark your CV with the wanted position and send it to:
Joanna Peng, joanna.peng@ert.ericsson.se, Phone +886 27461729, +886 916 937 180

Information about the positions can be given by Jonas Eriksson,
jonas.eriksson@ert.ericsson.se, +886 931 385 063

For more information about ERT and Taiwan, please visit :
http://www.ert.ericsson.se
http://www.lonelyplanet.com
http://www.sinica.edu.tw/tit/

Make yourself heard.

ERICSSON

Application: Anthony Bradshaw, Manager of System Support NRJ, Anthony.Bradshaw@nrj.ericsson.se.

The IMT-2000 Research and Development department located in Yokosuka Research Park, south of Tokyo, has the following opening.

Senior System Designer/ System Designer

● In Yokosuka Research Park (YRP) we are a growing unit working with software development for the Wideband Base Transceiver Station (WBTS) with NTT DoCoMo as the customer. The software project for this product is distributed between several design centres in Sweden and YRP in Japan. Our tasks concern system design and software development for operation & maintenance and traffic control. The software is run in an embedded system and we are currently using C and VxWorks real time operating system.

We are now looking for a senior system designer or system designer with at least 3 years experience in mobile communication. As we are still a small unit, work tasks will vary and can include such as; customer requirement analyses, system design, coaching of junior staff, participate in design and code reviews and team leading. Knowledge in the following areas is regarded as a merit, C, VxWorks, UMTS, WCDMA, WBTS and Wictoria. As the WBTS project is distributed on many design centres a good contact network in PU-WRN would also be an advantage.

Contact: Jan-Olov Eriksson, +81 468 47 5212, jan-olov.eriksson@nrj.ericsson.se or Erik Svedmark, +81 468 47 5215, erik.svedmark@nrj.ericsson.se

RSDC – LATIN AMERICA, ERICSSON SERVIÇOS DE TELECOMUNICAÇÕES LTDA., SÃO PAULO, BRAZIL

Senior Consultants and Consultants

Latin America offers you a huge expanding telecom market with an expected increase of 50% in the subscriber base only this year, new licenses for PCS, WLL and 3G migration, strong macroeconomic growth and the very best of Latin culture.

The Regional Service Delivery Centre for Latin America and the Caribbean is responsible for the delivery, co-ordination and development of Network Design and Network Performance Improvement services in the region with base in Sao Paulo, Brazil. All technologies represented in Ericsson Services and the region are part of the assignment. The main standards are thus: TDMA, CDMA, GSM and Fixed Networks.

● The successful candidate has: A consultant profile with excellent teamwork and customer relation skills, University degree and fluency in English. Operator experience, Spanish and Portuguese are desired. All positions have extensive customer contact. We have the following positions opened:

Radio Network Design and Performance Improvement

● Senior Consultant - min 6 years relevant experience. Consultant - min of 3 years relevant experience. The task involves RF design, RF optimization, frequency planning, IS136 knowledge, microcell and indoor design, strategic planning and others.

Switching Network Design and Performance Improvement

● Senior Consultant - min 10 years relevant experience. Consultant - min of 5 years relevant experience. The task involves Traffic dimensioning, O&M, Data Transcript, #7 signaling, AXE and other Ericsson equipment knowledge and others.

Datacom Network Design and Performance Improvement

● Senior Consultant - min 6 years relevant experience. Consultant - min of 3 years relevant experience. The task involves SNMP, traffic and billing requirements, Unix, NT, Model tools (e. g. PlasmaSim), Routers, IP and Wan networks, security systems, to design and troubleshoot.

Contact Roselene Rodrigues, +55 11 6224 1026

ERICSSON RDC, SHANGHAI

PC-SSS Chairman

Ericsson RDC is a 3.5 years old company with around 200 very young and well educated engineers. Within PU Access we have got the responsibility for AXE 10 SSS and are now looking for someone who can run PC-SSS for at least one year.

● Requirements: At least 4 years experience of design and system work within AXE 10. Experience in SSS would be an advantage. Good human skills in communication and leading meetings are also required.

You are a sociable and flexible team player with a positive attitude to make things happen.

Contact: Georg Bryntze, +8621 6237 5588 ext 21622, +86 1380 161 9533, georg.bryntze@-rdc.ericsson.se

GLOBAL SERVICES REGIONAL OFFICE - ASIA PACIFIC (GSRO-AP)

Within GSRO-AP, we have a vacancy for the following function:

Business Manager, GSRO-AP

● Location: Beijing, China. Supervisor's Title: Vice President & General Manager, GSRO-AP

JOB RESPONSIBILITY: The Business Manager (BM) has the overall responsibility for all, combined Service business in respective Market Units (Region). The BM will together with the Market Units set strategies, objectives, tactical plans and Order/Sales/Margin budgets for the Service business and is responsible for implementing the Strategic Plans from a commercial standpoint in the Market Units. The BM will also follow up progress towards plans in the Market Unit through monthly and quarterly Business Reviews. The BM is responsible for defining, growing and maintaining a best in class Sales & Marketing organisation throughout his/her geographical area(s) of responsibility. The function works together with Shared Service Product Unit's (SPU) in the GSRO to ensure that the SPUs' directives regarding product profitability are carried out. The BM works closely with Market Unit Heads, Customer Service Heads Global Account Managers, Key Account Managers and New Account Managers in the Market Units as well as SPU Heads in the GSRO.

The position has a high degree of initiative and decision making ability with regard to establishing and implementing strategy and tactics for the development and evolution of the Service Sales organisation within the assigned Market Units. It also has authority to decide and communicate commercial decisions regarding pricing and other commercial policy. The Business Manager has the overall, consolidated profit/loss responsibility for Services Sales in the assigned Market Units for the complete Services portfolio. The function works in strategy setting, supporting and following up/controlling capacities towards the Market Units.

JOB REQUIREMENT/SKILL SETS: B. Sc. in Business, Engineering or equivalent with concrete work experience.with the following skill sets: Good Business Knowledge in Operators' business situation-Overall good knowledge and understanding of Business, Financing, Accounting and -Marketing and Sales. Understand Business management. Strong ability to analyse and reflect. Strong planning and organisational skills. Account Planning, experience and skills. Ability to identify business opportunities on new Services. Able to influence and to build trust and confidence-Strong and effective leadership skills. Be able to work in a team and lead a team towards the set goals. Effective interpersonal, presentation and communication skills. Strong ability to build relationship on senior executive level with customers and within. Ability to work in a cross-cultural environment. Negotiation skills.

Contact: Carl-Olof Bergqvist, VP & GM GSRO AP +603-708 7350, Carl-Olof Bergqvist@esm.ericsson.se.
Application: Charles Retnam, HR, +603-708 7115, Charles.Retnam@esm.ericsson.se.

NETWORK ROLLOUT SERVICES,

Network Rollout Services is one of the four (4) Service Business Lines within Global Services Regional Office- Asia Pacific.

Our regional office in Kuala Lumpur, Malaysia is responsible for network rollout service delivery, sales growth and profitability for all markets in the Asia Pacific region - 16 countries in all, including China. Developing new competences for 3G,System Integration and MVSI across the region, while maintaining our 2G rollout and migration competences, are key strategies.

We support our regional market units in both pre-sales and project rollout for all project types including Turnkey, by delivering the required skills and competencies to the right place at the right time. Partnerships with Services providers and establishment of Regional Integration Centres (RICs) are features of our total solution supply strategy. We are presently in need of additional dynamic, enthusiastic and competent individuals for a range key roles as follows:

Datacom Backbone Integration Engineers

● Will have responsibilities for installation, Configuration and Integration of a datacom Backbone within a GPRS/UMTS packet switching network. The role requires knowledge of mobile telephony systems together with strong datacom experience including TCP/IP, Frame Relay, and ATM. As the portfolio of datacom services includes Integration of third party products (e.g. Cisco), the datacom knowledge should not be restricted to Ericsson products.

GPRS/GSN Network Integration & Verification Engineers

● Responsible for the Implementation of GSN and Integration of GPRS/UMTS to existing GSM networks. The role requires a good working knowledge of mobile telephony, in particular GSM/GPRS/UMTS networks, including an understanding of current datacoms principles applied to mobile telephony. Experience with AXE/CME20 implementation is an advantage, when integrating towards the existing network elements. Experience with other vendor equipment would also be valuable.

Applications for both Integration Engineer positions encouraged from candidates with any of the following experience/background. Competence building paths have been identified. Willingness to Travel within the EMEA region on occasions is required. Network Integration/Implementation experience within GSM networks. AXE/CME20 preferred. Good working knowledge and/or implementation experience of Ericsson datacoms including TCP/IP, Frame Relay, TAM. GPRS/UMTS Network Verification/Testing experience. Working datacoms knowledge of third party products.

RIC Project Manager

● Detailed level time schedule preparation for RIC Implementation & Integration activities. Coordinate/manage all RIC Implementation and Integration activities according to SRO and Service Supply manual procedures. Liase with MU & Customer project managers, RIC Supervisors, and any third party suppliers. Coordinate technical requirements with customer contacts. Organize onsite requirements for Implementation & Integration activities. Interface/manage non-core RIC activities (e.g. Installation). Applicants should have proven Technical project management experience preferably within Implementation or Integration programs. GPRS or UMTS knowledge/experience would be an advantage.

CCR Collection and Implementation

● Responsible for the Implementation of GSN parameters and associated network configuration requirements to ensure a complete integration solution. The role requires in depth knowledge of Mobile Network Architecture and GSM call flow principles. An understanding of current datacoms principles applied to mobile telephony is also needed. Good communication/teamworking skills are required, particularly as the role involves working directly with the customer in gathering the node customer configuration requirements. Experience with AXE/CME20 implementation is an advantage, when integrating towards the existing network elements. Applications would typically have experience in implementing network configuration in GSM networks. Competence building paths have been identified. Willingness to Travel within the EMEA region on occasions is required.

Contact: Josip Matasic, +60 3 708 7337, Josip.Matasic@esm.ericsson.se. **Application:** Charles Retnam +60 3 708 7115, Charles.Retnam@esm.ericsson.se.

VODAFONE UK ACCOUNT, SOFTWARE ROLLOUT AND SUPPORT DEPARTMENT

Project Managers

Based at either Guildford or Burgess Hill. Ensuring delivery of software services to Vodafone UK with respect to software introduction, problem management, emergency support and general consultation. Vodafone's network consists of the existing GSM equipment, together with the recently installed Packet Backbone Network and GPRS infrastructure. UMTS will start to be implemented within the next few months.

● The Role: Project Manage software introduction projects (GPRS/UMTS) towards Vodafone: Build good customer relations with Vodafone. Specify the scope of the project. Lead and drive the project to ensure successful delivery. Communicate status in projects in writing and verbally, e.g. project reports and presentations both internally and to the customer. Look at working practices within the projects and to improve the way we can work. Manage the interface to the supply organization.

Ideal Skills & Experience profile: A suitable candidate will have solid software project management skills – having worked with AXE mobile systems or datacom products. ATM and IP networking knowledge along with AXE/GSM software knowledge would be ideal.

In addition an ideal candidate would have the following skills: Strong customer focus. Drive to commit and deliver results. Good communication and interpersonal skills. Good organization skills.

Support Engineer

Based at Guildford. The Software Rollout and Support department, located in Guildford, offers a valuable opportunity for individual involvement in state of the art telecoms applications such as: UMTS. GPRS. Data Networking. GSM.

● The role of the Principal Support Engineer will be to work within the team focusing upon: Maintaining and improving general customer satisfaction. In-Service performance of key network elements. Emergency support of the network. Investigation of customer problems and questions.

Skills Required: We are seeking expert Software Trouble Shooters to troubleshoot and fix problems on the vodafone live network, offering a technical consultancy service on in-service issues. Candidate will be qualified in computer science, IT, Electronic Engineering, Physics or similar and will have a minimum of 2 years work experience in a software support organisation.

A knowledge of AXE GSM systems, GPRS, UMTS or data networking would be ideal coupled with a general appreciation of the software product lifecycle. Experience of software design, acceptance and / or delivery would also be of interest and beneficial to this role.

UMTS TCM Engineers

(Test Configuration Management)

Based at either Guildford or Burgess Hill. Ensuring delivery of software to Vodafone UK with respect to software introduction, problem management, emergency support and general consultation. Vodafone's network consists of the existing GSM equipment, together with the recently installed Packet Backbone Network and GPRS infrastructure. UMTS will start to be implemented within the next few months.

● The Role: Planning, alignment and execution of local TCM activities to support Market adaptation and the GPRS/UMTS verification projects. Setting up configuring and maintaining the complete GPRS /UMTS test network. This involves: Maintaining the test network with Data transcript that mirror Vodafone's live network.

Introduce new functionality into the test network in line with new releases and Vodafones requirements. Preparation of the Vodafone software dump. Update the software dump with correction packages. Preparation of Data Transcript for all functionality. Parameter setting. Identify, investigate and resolve TCM problems found during verification activities. Make configuration changes to network elements. Support the Vodafone UMTS trial activities and the UMTS/BSS Global FOA activities. Build a good customer relationship with Vodafone

Ideal Skills & Experience profile: An ideal candidate will have previous TCM experience with a good understanding of verification and support processes. Solid technical knowledge - having worked with AXE, mobile systems or Datacoms products. ATM and IP networking knowledge along with AXE/GSM software knowledge would be ideal.

In addition, an ideal candidate would have the following skills: Strong customer focus. Planning and organisational skills. Drive and commitment to deliver results within time. Ability to discuss technical issues. Good communication and interpersonal skills. Ability to work effectively in a stressful environment.

UMTS Software Engineers / Senior Engineers

Vodafone UK recently succeeded in winning the largest UMTS license available in an auction held by the UK government.

To meet the growing demands of the largest cellular operator we have established a dedicated organisation. This office deals with the complete package of commercial, marketing, solutions engineering and strategic planning. This ensures that our customer has a dedicated facility to meet their exacting requirements.

Ensuring delivery of software services to Vodafone UK with respect to software introduction, problem management, emergency support and

general consultation. Vodafone's network consists of the existing GSM equipment, together with the recently installed Packet Backbone Network and GPRS infrastructure. UMTS will start to be implemented within the next few months.

● The Role: Execution of Market adaptation and verification activities needed to introduce new GPRS/UMTS functionality into Vodafone's network. This involves: Node testing on the AXE10, ATM, IP and UNIX platforms. Identify, investigate and resolve problems found during verification and acceptance activities. Make configuration changes to network elements. Assist Vodafone with integration of their IT systems. Handle the stream of UM/ACA releases between main releases. Assist Vodafone during software upgrades of the network nodes. Support the Vodafone UMTS trial activities and the UMTS/BSS Global FOA activities. Build a good customer relation ship with Vodafone.

Ideal Skills & Experience profile: A suitable candidate will have solid technical knowledge - having worked with AXE, mobile systems or Datacoms products. ATM and IP networking knowledge along with AXE/GSM software knowledge would be ideal.

In addition, an ideal candidate would have the following skills: Strong customer focus. Drive and commitment to deliver results within time. Ability to discuss technical issues. Good communication and interpersonal skills. Ability to work effectively in a stressful environment.

Contact: Cathy Roach, HR, cathy.roach@etl.ericsson.se. **Application:** myfuture@etl.ericsson.se.

ERICSSON LTD, UK

Manager – Sales & Support EMEA

● BACKGROUND : Network Optimisation Systems (NOS) is developing and promoting products for planning, optimisation and monitoring of mobile networks under the TEMS brand name.

NOS is a part of Telecom Management Solutions within Ericsson Global Services. In total we consist of 350 people with 60 of these working with sales and support. The sales and support organisation operates with regional offices in Guildford (UK), Kuala Lumpar (Asia Pacific) and McLean (Americas). We currently have 20 people working within the EMEA office.

RESPONSIBILITY: As a Regional Manager you are responsible for sales and first line support towards customers in EMEA. You will also support the Ericsson Market Units in their sales efforts. The First Line support responsibilities encompass basic support for all products and managing a help desk. The group will also handle system roll-out, installations and customer training. You will be responsible for sales and cost targets for the region and will manage the operations of the unit including competence development of your group. You will report to the Director of Global Sales and Support and be a member of the NOS Sales and Support Management Team.

SKILLS: Your expertise covers management of organisations working towards customers. You have previous experience from marketing, sales, customer visits, verbal and written presentations as well as quotations and negotiations. You establish long-term relationships with your customers and you shall be able to represent NOS at various levels to the customer. You understand that giving good customer support is a lever to gaining higher customer satisfaction and increase sales. You are independent and self-motivated with strong communication skills and can motivate and create drive in an organisation.

REQUIREMENTS: You should have a university degree, preferably MSc/MBA or equivalent. Good written and oral skills in English. Your background should be Ericsson and experience from the area of planning and optimisation is desired. You be based at ETL in Guildford, UK.

Application: Louise Doherty, HR Resourcing, myfuture@etl.ericsson.se, quote ref 492.

ERICSSON EUROLAB DEUTSCHLAND, HERZOGENRATH/AACHEN, GERMANY

EED in Herzogenrath/Aachen, Germany, in the heart of western Europe, is a young and growing company with an open working atmosphere and highly motivated colleagues.

As part of the Core Network Mobile System operations, EED has the overall responsibility for the MSC/VLR product and the Integration, Verification, Supply & Support of UMTS Core network Mobile Systems. With that responsibility, EED will play a key role in introducing and supporting the 3rd generation mobile systems, UMTS, on the world market. CAPC Systems Management is responsible for system studies in early phases of product development of the next generation of mobile (3G, UMTS) and fixed network solutions (Engine).

An important aspect is to find synergies and to identify core application solutions between mobile and fixed systems.

Source System Designer

● We are looking for a Source System Designer, who would like to secure the quality, the profitability and the consistencies of the products in next generation solutions. Next generation solutions are based on packet switching (IP and/or ATM), hence this will provide an opportunity to build competence in those future based technologies.

Since it is essential to discuss and investigate the system architecture in the early phases of a project, one Source System Designer is always appointed as team leader for one of our ongoing projects. You would have to take the responsibility for all tasks related to the Source System Handling and co-ordinate those tasks towards the project.

Experience with AXE AM based design and the AXE10 platform is essential. A good knowledge of System 108 is a strong advantage, but not a requirement. Some travelling is expected.

PC-Chairman, 3G Core Networks

● We are looking for an experienced engineer, which together with other teams of chairman would like to secure the quality, the profitability and the consistencies of the products in next generation solutions. Next generation solutions are based on packet switching (IP and/or ATM), hence this will provide an opportunity to build competence in those future based technologies.

Experience with AXE AM based design and the AXE10 platform is essential. A good knowledge of System 108 is a strong advantage, but not a requirement. Some travelling is expected.

PC-Chairman Trainee, 3G Core Networks

● We are looking for an engineer, which together which together with more experienced chairman would like to secure the quality, the profitability and the consistencies of the products in next generation solutions. Next generation solutions are based on packet switching (IP and/or ATM), hence this will provide an opportunity to build competence in those future based technologies.

Experience with AXE AM based design and the AXE10 platform is essential. A good knowledge of System 108 is a strong advantage, but not a requirement. Some travelling is expected.

Contact: CAPC Systems Management, Robert.Ivarsson@eed.ericsson.se , +49 2407 575 704, Human Resources, Simon.Seebass@eed.ericsson.se , +49 2407 575 163

EED/X/D are responsible for MSC System Management and participate in the Core Network System Management. This includes overall System Management coordination of MSC related activities plus responsibility for specific core network hosted activities. We are working in the area of GSM 900, 1800, 1900 and UMTS systems. We are currently offering career opportunities for the following position:

Senior System Designers, GSM and UMTS

Proj.No 127/E00

● Your main tasks will be to carry out and coordinate system studies and other activities in the wide field of system management for GSM and UMTS projects. This will be in one or several of the following activity areas: Technical Studies for the Core Network & MSC; Characteristics & Dimensioning for Core Network & MSC; System Management Interface for Market activities; Core Network related Standardization; HW Platform Management; Operation & Maintenance.

Suitable candidates possess an engineering degree (e.g. telecommunications, electrical engineering or software engineering) with a minimum of 5 years experience in design, system level development or research. As we are looking forward to strengthen our system management organisation significantly we offer challenging positions for very experienced designers with the ability to motivate others, take decisions and convince with a strong and balanced personality.

Good verbal and written communication skills, a high level of personal initiative and the ability

Job Opportunities in Ericsson, Ireland

Network Operator Solutions Centre is a leading design centre, which provides Ericsson customers with solutions for the management and control of the multi-service Core and Fixed Access Networks. The unit provides management and control solutions across the Mobile Fixed Access domains

We focus on providing products and services that reduce the cost of ownership for network operators increasing the efficiency of their networks. We are dedicated to making our products the best of their type in the market.

If interested please send your Curriculum Vitae to

Michael McGann
Competence and Human Resources Manager
Ericsson Software Campus
Athlone
Co. Westmeath
Ireland

Or email, stating the job applied for in the subject area

recruit.ath@eei.ericsson.se

• Software Engineers
As a Software Engineer you will be working with applications for the management and control of Wireline and Wireless networks for Fixed and Mobile telecom networks. Essential skills include; C and C++, use case modelling techniques, Object orientated Analysis and Design techniques, especially UML, RUP (Rational Unified Process). You must have experience in developing on Open Systems (Unix preferably). Some telecom exposure would be of benefit.

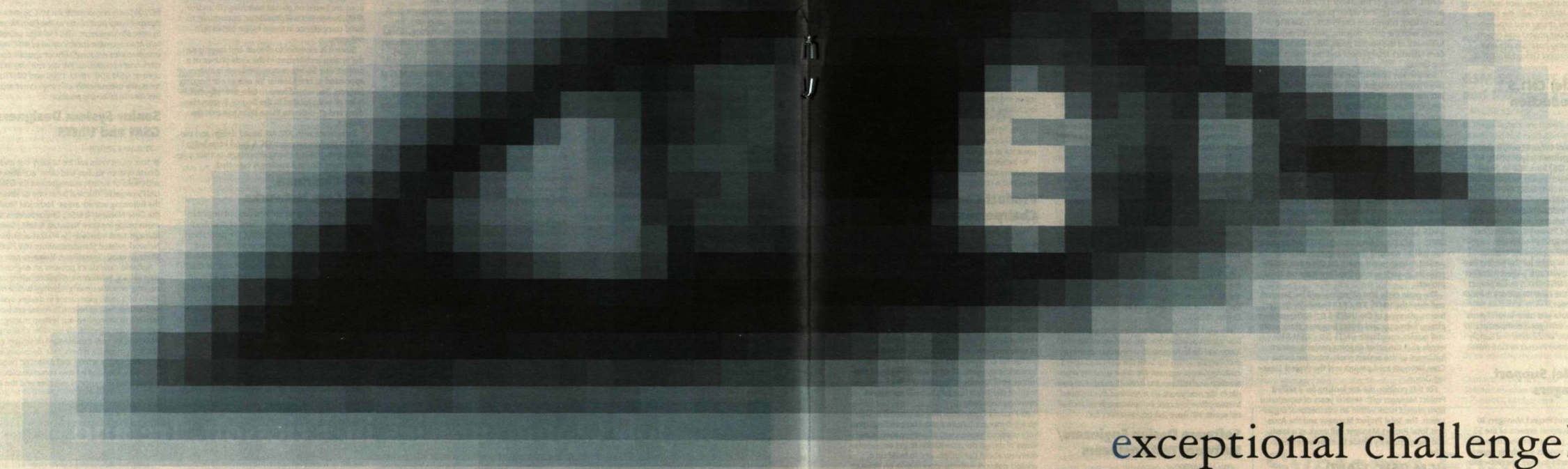
• Software Quality Engineer
Responsibilities will include; ensuring compliance to ISO9001 and facilitating CMM maturity level progression. You will work proactively with software development projects to capture and implement process improvement Opportunities. You must have up to 3 years working experience in a software development environment. Knowledge of software quality practices and project quality coordination is a must.

• Configuration Management Engineer
We have excellent configuration management systems in existence; the challenge is in managing the transition to Open Systems. We need someone who is still involved with daily implementation issues in a multifunctional software environment. Essential skills and experience include; Degree in computing or software engineering. Two to three years working experience in a design environment. Working knowledge of Clearcase as a tool and an understanding of configuration management issues.

• Technical Product Manager
As a Technical Product Manager you will take customer requirement for new Telecom Networks, add new functionality and make adaptations to Telecom Systems. You will write the technical specification documents and communicate these to software designers. Some liaison with sales staff will be required. Essential skills include; a degree or equivalent, 2 years experience in SW design in the Telecom industry. Up to 2 years Systems Engineer experience with an understanding of higher level architecture.

• Regional Sales Manager (Telecom Management Products)
We are building a sales team comprising of a Regional Sales Manager and International Account Managers who will be working within the Americas regions. This team is responsible for establishing new and maintaining existing business in the 'wire-line operator market', selling Telecom Management Products. As a Regional Sales Manager you must have a proven track record of 'in-direct' selling with a background in the Telecom Industry. You must have between 3-5 years experience as a Sales Manager/Internal Account Manager. Technical knowledge of Switches, Transmissions and Access products are desirable.

Are you looking for an



exceptional challenge?

Come and join one of the largest e-business platforms in our business, on a temporary basis. Welcome to Stockholm!

We need You! You need us!

Joining Ericsson's e-business platform program will base you firmly in the common platform for all Ericsson e-business initiatives. In addition you will be a partner developing and designing the e-business solutions of the future.

Any company within Ericsson intending to actively participate on the Internet will use the ericsson.com portal. To be a partner in our team for a while could be a smart investment for your business.

Why not get actively involved in our common challenge – capturing the coveted position as the "Mobile Internet's undisputed market leader"!

And of course spending some time in Stockholm won't hurt you!

Many posts to be filled

- **IT ARCHITECTS** with good technical skills, analytical talent for designing and specifying e-business solutions.
- **DESIGNERS** with knowledge in the following areas: Web sphere, Domino, DB2, OS390, Net commerce, MQ series and Java.
- We are also looking for many **TEST PEOPLE**, such as: Test managers (TM), Test scenario writers (TSW) and Test executors (TE). Support like: Test Tool Team (TTT), Defect manager (DM), Technichal Team (TT) and System integration test co-ordinator (SITC).
- We also require many **OTHER COMPETENCIES** at the moment. You can find a list with examples of jobs at: http://rekryt.ericsson.se/intranet/go/off/publicer/dataisit/121.htm

Goals for the program

The ultimate goal of the e-business platform program is: To make e-business "business as usual". To enable customers, suppliers and stakeholders to interact efficiently and effectively with Ericsson over the Web. Ericsson can realize substantial business benefits from this!

Using a series of business-led projects and sub-programs, the program is responsible for providing e-business applications that will run on a managed platform. This will allow Ericsson to develop more cost effective business solutions, more cost effectively and giving greater customer satisfaction.

Where are we?

The program has delivered a comprehensive e-business architecture and successfully delivered a pilot e-commerce application for Enterprise Solutions Segment.

Currently the program is planning and implementing the migration of many of the existing disparate services to the new platform. It is also creating an enterprise portal known as ericsson.com. This will serve as a unified access point to Ericsson information and services.

You can find more information about the program at http://ebusinessplatform.ericsson.se/

Please e-mail your application with CV to:
recruitment@edt.ericsson.se

ERICSSON

The platform for e-business@ericsson.com

to work autonomously are essential for this position. Knowledge of mobile Telecommunications or IP & datacom networks is an advantage.

Contact: EED/X/DKC, Frank Sell, +49 2407 575 172, Frank.Sell@eed.ericsson.se; HR, Christina Schneidawind, +49.2407.575-7814, eedcsch@eed.ericsson.se

EED/X/R department at EED has the overall project responsibilities for the complete node deliveries. We are about to embark on one of the most exciting and challenging projects within Ericsson. GSM R9 project, and our first UMTS delivery, have been combined together in order to maintain our strong market presence and ensure that we are FIRST-TO-MARKET with the UMTS package. We now need strong and experienced individuals to support our project and department team. The following positions are now open: The NPU-MSC Project Office EED/X/R is looking for a

MSC (SS Node) CN1.5 Product Introduction Manager

Proj.No 183/E00

● The NPU-MSC Project Office EED/X/R at EED has the project management responsibility for the Switching System (SS) from TG0 to phase out. The MSC node responsibility include all GAS software delivered from NPU-MSC, CAPC, CNCP, CSPP, SCSA (GDB) and RDS.

The responsibilities include planning and execution of MSC related product introduction activities for Acceptance and Primary Consolidation. You would manage the MSC PI team and be responsible for having the appropriate enablers (resources, tools etc.) in place for the project execution. In this position, you as a project manager would interface to the MSC CN1.5 Indus project and report directly to the Core Network 1.5 Product Introduction Manager.

As a suitable candidate you have several years of Ericsson experience with good competence in the area of AXE software verification and supply process. You possibly have Project or Line management experience.

MSC (SS Node) Support Project Managers

Proj.No 184/E00

● We now need Support Project Managers to overlook all 3rd Line Support aspects of the SS Node. In this position, you as a project manager would interface to the various supplying organisations and report directly to the Core Network level Support projects. As a suitable candidate you have several years of Ericsson experience with good competence in the area of Maintenance and Modification Handling, AXE Support. You possibly have project or line management experience and are familiar with SW Support processes. You should have experience in Configuration, Product and/or System Management in AXE. The work involves continuous contact with various internal Ericsson functions. Close cooperation with PLM, System Management and Core Network Support Project Office is required. The activities span from issuing assignments, planning, managing and following-up on all related support activities such as Correction packages, Software handling (packages), ISP, etc.

In any of these positions you will need good planning, communication and co-operation skills. There are plenty of opportunities for travelling, networking, personal and technical development. Don't hesitate to give us a call for further information.

Contact: Andreas.Westh@eed.ericsson.se+49 2407 5757869, HR, Christina Schneidawind, +49 2407 575 7814, eedcsch@eed.ericsson.se

Configuration Manager

Proj.No 205/E00

● The main tasks and objectives will be: Development of necessary CM processes and documents, manage Change Control (Chair CCB meetings etc.), handle Project CM Audits, identify and manage Baselines.

In this position you will gain a lot of insight in how NPU-MSC plans, organizes and runs projects. You will learn which organizations are involved in decision making and how their roles and interfaces are defined, acquiring valuable competence and knowledge for future career opportunities.

One of our main Configuration Management tools is Ericsson ClearCase, so knowledgeof this would be an advantage. As a configuration manager you will need strong initiative, good planning, co-ordination and communication skills and the nature to never give up.

Total Project Manager

Proj.No 185/E00

● for the UMTS 3.0 / GSM R10 MSC Project. As Total Project Manager your primary task will be to set-up and coordinate the planning activities for the GSM R10 MSC release, combined with the UMTS 3.0 features, in parallel with the ongoing UMTS 1.5/2.0 and the coming UMTS 4.0 projects. You will be working closely together with the project management teams for the other UMTS projects, as well as with the Core Network Total project.

The main tasks and objectives will be: Support and steer the UMTS 3.0 / R10 Feasibility Study teams, planning of the UMTS 3.0 / R10 execution phase, Follow up and report progress, time, costs and quality, coordinate UMTS 3.0 / GSM R10 needs with the other ongoing projects, ensure fulfilment of the project goals, interface to the Core Network total project and the Project Steering Group.

For this key position we are looking for a Senior Project Manager, with several years of project management experience within international organizations. Line management experience would be an asset.

Assistant Total Project Manager

Proj.No 186/E00

● for the UMTS 3.0 / GSM R10 MSC Project. As Assistant Total Project Manager your primary task will be to, together with the Total Project Manager, set up and coordinate the planning activities for the GSM R10 MSC release, combined with the UMTS 3.0 features, in parallel with the ongoing UMTS 1.5/2.0 and the coming UMTS 4.0 projects. You will be working closely together with the project management teams for the other UMTS projects, as well as with the Core Network Total project.

The main tasks and objectives will be: Support and steer the UMTS 3.0 / R10 Feasibility Study teams, planning of the UMTS 3.0 / R10 execution phase, follow up and report progress, time, costs and quality, coordinate UMTS 3.0 / GSM R10 needs with the other ongoing projects, ensure fulfilment of the project goals, interface to the Core Network total project and the Project Steering Group.

For this position we are looking for a skilled Project Manager with several years of experience from project work within an international organization. The Total Project Manager and the Assistant Total Project Manager will work as a team, and independently divide tasks between each other.

UGM (MSC 1/APT) Project Manager

Proj.No 187/E00

● for the UMTS 3.0 / GSM R10 Project. UGM is the acronym for UMTS GSM Mobile applications. As Project Manager your primary task will be to set up and coordinate the MSC/Application part of the GSM R10 MSC release, combined with the UMTS 3.0 features.

You will be working closely together with the project management teams for UMTS 1.5/2.0 and later UMTS 4.0, which will be running in parallel, both on MSC total and MSC/Application level.

The main tasks and objectives of the UGM team will be: Support and steer the Feasibility Study teams and the subprojects, planning and execution of the UGM 3.0, follow up and report progress, time, costs and quality, coordinate between UMTS 3.0 and the parallel projects, ensure fulfilment of the project goals, interface to the MSC total project and the Project Steering Group.

For this position we are looking for a skilled Project Manager with several years of experience from project work within an international organization. Experience of AXE SW and mobile systems would be an advantage.

UGM (MSC 1/APT) Assistant Project Manager

Proj.No 188/E00

● for the UMTS 3.0 / GSM R10 Project. UGM is the acronym for UMTS GSM Mobile applications. As Assistant Project Manager your primary task will be to, together with the Project Manager, set up and coordinate the MSC/Application part of the GSM R10 MSC release, combined with the UMTS 3.0 features. You will be working closely together with the project management teams for UMTS 1.5/2.0 and later UMTS 4.0, which will be running in parallel, both on MSC total and MSC/Application level.

The main tasks and objectives of the UGM team will be: support and steer the Feasibility Study teams and the subprojects, planning and execution of the UGM 3.0, follow up and report progress, time, costs and quality, coordinate between UMTS 3.0 and the parallel projects, ensure fulfilment of the project goals, interface to the MSC total project and the Project Steering Group. For this position we are looking for a Project Manager with several years of experience from project work within an international organization. Experience of AXE SW and/or Mobile Systems would be a clear advantage.

Overall UMTS/MSC/VLR Test Leader

Proj.No 189/E00

● UMTS CN 1.5/2.0. As Overall Test Leader your main tasks are: definition of overall test strategy, to coordinate the test planning of subprojects, coordinate all test related problems, supervision of the test execution phase, be the contact person towards TCM, progress reporting to the GMSC/MSC/VLR project manager . You will be part of the MSC node project team and work together with the test leaders of the subprojects and associated projects.

Your main responsibility is to make sure that all new features are successfully verified until MS8 (end of Function Test). You should have several years of experience in Function Test. You need to establish a good contact network, be very self-driven and cooperative, and have excellent communication skills. Previous experience as a project or team leader would be an asset.

We offer a possibility to join a dynamic, truly international organization, and work in the forefront of the mobile systems development, facing a tremendous resonance from the competition and thus a real challenge ahead.

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EED/X/P is responsible for the development of the applied mobile source system (1/APT) and the Mobile Switching Subsystem (MSS) within the 2nd and 3rd generation Mobile Switching Center (MSC).

We work from pre-pre studies through execution until product phase out. Next years the challenge will be to migrate to a new core network architecture satisfying both the GSM and UMTS customer requirements. We are a growing organization and will expand from 85 to ca. 120 people in the next years. As a result of this we need to strengthen our core competence in all technical areas. We have job opportunities for:

Software Design Engineers/ Software Test Engineers

Proj.No 35/E00

● As a result of this we would like to strengthen our core competence in traffic handling and network architecture with external expertise. We are offering plenty of opportunities to learn and progress in a challenging and changing design development and software test environment. You would be part of a fast moving team developing and testing a new system, which migrates towards a successful future proof development product. A key product for Ericsson for its market positioning.

For this reason we are looking for a number of experienced software design and software test engineers who want to play a leading role in the evolution of Ericsson's products in the fast moving mobile world market.

For Software Design: You should have a minimum of 2 years experience in a design development area be familiar with complete telecom systems, have programming experience in a number of different languages, SDL knowledge, a background in telecommunications is preferred with a working knowledge of structural design methods is required for this position.

To understand the complexity of our system is part of each designer's responsibility whenworking on our software modules, the design documentation for the interfaces or the system studies.

For Software Testing: You should have a minimum of two years experience in software maintenance or software testing, be familiar with complete telecom systems, have programming experience, very good analytical abilities and a strong interest in troubleshooting. Experience in software testing in a simulated or real environment, preferably on AXE10 with mobile application is a clear advantage. Currently we are also running a Pilot investigating the usage of new test environments such as TTCN in order to enhance our our software testing possibilities for futureproducts.

Throughout our design projects we use the team work concept which encapsulates the team's responsibility for planning the work package, designing products and producing associated documentation as well as function testing of the work package. For both positions: Relevant Ericsson experience is a plus but not essential. To be successful you need to have very good communication skills, quality orientated, innovative and a strong team player.

System or Senior Designers

Proj.No 52/E00

● in various areas with plenty of opportunities for development such as: UMTS CN2 Pre-feasibility studies, MSC Technical Areas: Pre pre studies, SoC, Standardization, GSM/UMTS R10 Architecture, Platform and 1/APT evolution studies. Depending upon your qualifications and experience we will find the right place for you in our teams to suit your wishes.

For further career advancements and professional orientation a dedicated competence manager will be there in order to support your long-term development. You would be part of fast moving development department, being involved in modeling a major part of a new system which will be the successful product of Ericsson in the very near future.

You should have a minimum of 2 years experience in system management area, such as working in pre-studies, feasibility studies, quick studies, having a strong telecommunications background, having built up expertise in one or several parts of the AXE10 mobile system, be familiar with GSM standards. Other relevant Ericsson experience is a plus but not essential.

To be successful you need to have very good communication skills, be quality oriented, innovative and a strong team player.

Product Committee Chairpersons or Trainees

Proj.No 86/E00

● in the areas of 1/APT and MSS with plenty of opportunities to build and expand competence by technical steering and supporting of: UMTS Feasibility studies , execution (Core Network 1.0, 1.5, 2.0), Reviewing pre-study items, technical reports, Participation in a variety of different review for a (e.g. MC 108, PC AXE), Technical co-ordination and technical decision being made on system level, Ensuring system integrity long-term, Finding system/software design solutions together with implementation designers, Providing expertise for designers, maintenance, OPM, Spreading competence by utilising Product Committee Pool Members/Trainees (PC Pool = a team of designers heading to build up system overview knowledge).

As Product Committee Trainee you will undergo a 3-6 months trainee period (depending upon your previous experience) of participation in reviews of design documentation to get an overview about the system and to build up a contact network with the view to take on Product Committee Membership/ and or Chair(wo)manship for ca. 1.5 years.

You will gain a vast overview about our system in a short span in time at intense pace and you migrate into a system expert at short notice. For further career advancements and professional orientation a competence manager will support your long-term development.

You should have a minimum of 2 years experience in design development of a mobile system, be familiar with GSM standards, having a strong telecommunications background. System design experience (e.g. feasibility studies, quick studies) is a clear advantage.

You should have strong co-ordinative skills, excellent communication skills, you should have very good time-self-management skills, be a very good team player. Other relevant Ericsson experience is a plus but not essential.

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Competence Manager

Proj.No 72/M00

● We are looking for an enthusiastic, pragmatic, goal and people oriented manager and colleague, who will be responsible for 25 to 30 people. You must have excellent leadership, communication and (self-) management skills. You will take care of finding the optimal match between operations and business needs versus our people's competencies, wishes, ambitions and capabilities on the other side.

Some main tasks and activities: Resource planning, project resource contracts, participation in assignment board and X/P management team, performance and development talks, recruitment, salary review & setting, team coaching, career development and planning, keep a thorough overview and understanding of all operations within X/P, understand impacts from future technologies for strategic competence planning etc.

You are part of the X/P management team and together with your colleague CM's you also drive the further development of our organization, we use P-CMM to enhance our people management

practices. The ideal candidate has a SW Development and Telecommunications background, combined with previous management experience (line, project).

You should have the combination of strong operational orientation and a strong interest in human beings. You will gain strong experience in line and people management at an intense pace and you will be able to take responsibility in further developing X/P. Also you will get a good understanding (and influence) on our department operations and our way into 3G technology.

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PRODUCT MANAGERS FOR GSM, UMTS AND 3G IP EVOLUTION

Strategic product management for GSM, UMTS and 3G IP Evolution is done in co-operation with local product managers, core network product managers and system experts.

The node product unit MSC strategic product management at EED is a new unit and belongs to the Core Network Mobile Systems international organization.

The focus is on the MSC business and product aspects and our tasks include MSC business planning, business cases, pricing, standardization strategies, product roadmap & plans, release responsibilities, product packaging, statements of direction, MSC meganetwork program, contract and tender support, and product presentations.

We participate actively in formulation of the 3G and All IP Architecture core network contents with our key customers and partners in Ericsson. We look primarily for experienced product or system managers who have a solid technical and business understanding of mobile solutions offered by Ericsson. We have positions open both in the MSC Product Planning and Business Management & Marketing sections:

MSC Program Manager

Proj.No 146/E00

● MSC program manager has an overall responsibility for the planning of MSC product taking into account market requirements, business aspects, technical trends and standardization strategies. The program manager also inter-works with the development projects in order to get the created plans implemented in consecutive MSC releases.

MSC Meganetwork Program Manager

Proj.No 147/E00

● MSC meganetwork program manager has responsibility for planning the introduction of high capacity and short time to customer concepts in MSC and networks in order to cope with the requirements according to the meganetwork study. The task requires a solid understanding of the whole time to customer flow.

MSC Strategic Product Managers

Proj.No 145/E00

● MSC strategic product managers are responsible for defining product solutions with the close co-operation to market. They also responsible for the planning the development of product management areas related to the MSC product considering the profitability over the product life cycle. The tasks include defining product strategies, development of product information, customer presentations and tender and contract support. For further information concerning our unit, tasks and responsibilities, please visit our home page: http://www.eed.ericsson.se/services/eed-x-x/welcome.html

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The Software Engineering Support department (EED/X/I) is an organization having the responsibility of all SW engineering related issues within the NPU-MSC of CNM (GSM/UMTS). Our customers are projects and line organizations, who need a competent partner on the area of SW Engineering. Our primary focus is on operational support, but we also work out strategic directions.

EED/X/I wants to be a part of a paradigm change on the area of the Methods and Tool. A proper SW Engineering is a must in order to speed our development process. It's our core competence, but it has to become more business driven. Getting closer to customer and being flexible and accountable for the results is a must, and a complete development life cycle view is needed on the area of SW Engineering.

Performance Coordinator

Proj.No 176/E00

● We are looking for a Performance Coordinator, who is strong leader and wants to be an ambassador of the change on the M&T area. In this role you will be responsible of the methods and processes, which are used in development projects of the Node Product Unit MSC, namely AXE 105/106, System 108 and the Work Package Concept. Your main task is the support of the R9/UMTS project in all methods and tools related issues as a part of the project organization. In addition you are expected to be involved in setting of a framework for our future methods and ways of working in cooperation with the Method Experts from our unit and partners. The SWES department will be your line organization and a strong support in all of your project activities.

For this position we are NOT looking for a traditional M&T person, but a capable leader who is able to direct development practices within large project organizations and thus secure the foundation of 3G development activities of CNM (Core Network Mobile systems).

You should be supportive, customer oriented and have at least one years experience in the M&T area and three year in AXE Development. MEDAX should be well known. Hands-on experience from PLEX and SDL implementation is merit.

Method Expert Engineer

Proj.No 109/E00

● We are seeking for candidates, who enjoy the area of methods. We expect you to become/to be an expert not only for already established methods within NPU MSC (Work Package Concept, System 105/106) but also for evaluating, developing, and introducing new ways of working in software development.

A suitable candidate should have at least 4 years of experience in the software engineering area. You should have worked with standard methods in software engineering, know state-of-the-art modeling and specification languages (e.g. UML, SDL) and have some experience with CASE tools. The ability to think analytical and abstract is essential for this job. Critical dealing with methods is also required.

Needless to mention that team working skills and ability are very important qualities for the canditates, but there's also a posibility to become a team leader for the group, depending on your ambitions. Formally, a combined degree in engineering/computer science and economics is a benefit.

Tool Prototyping Expert/Engineer

Proj.No 110/E00

● We are seeking for candidates, who like both: hacking and testing. We expect "hacking" facilities to develop tool prototypes and/or extensions to existing tools. However, the evaluation of existing tools and exploring their limitations require a testing mentality.

A suitable candidate should have at least 2 years of "real" programming experience. Your skills should range from languages like Perl, Python, Java, PHP, Visual Basic to a sound knowledge in database technology. Experience with CASE tools is beneficial but not a must. Formally, we expect a degree in engineering or computer science.

SDL Technical Expert

Proj.No 167/E00

● SDL product management is hosted by the department "Software Engineering Support" belonging to the NPU MSC and located at EED in Aachen. SDL PM has the product responsibility for SDLtool, a product based on TAU from Telelogic, tailored for Ericsson.

In order to strengthen the technical competence we are now looking for an SDL technical expert. The SDL technical expert will be working together with the SDL product management but with the focus on providing technical solutions to our customers. This includes things like good SDL design and to find work-arounds when there are problems or limitations in the product.

The main tasks will be to: Actively follow up problem areas and propose actions; Provide technical solutions to our customers; Participate in the SDLtool product planning with focus on SDL language and code generator issues; Participate in the SDL10/Plex technical expert group.

As a suitable candidate you should have at least 4 years experience in AXE SW design and with at least 2 years of SDL design. You should have a good technical competence with focus on finding solutions. Since this is an international responsibility with a lot of interfaces some travelling is necessary.

Project Manager

Proj.No 64/E00

● "SDL Support for NPU MSC". The Project Manager "SDL Support for NPU MSC" is responsible to identify the projects needs to further develop SDL, the needed tools and methods and relay these requirements to the "SDL Responsible for NPU MSC". You will support the "SDL Responsible for NPU MSC" in finding FOA projects, drive a SDL network and facilitate the sharing of SDL competence within the NPU MSC. The project Manager has to set -up and maintain a virtual SDL support organization, coordinate the SDL support needs from the NPU MSC User Projects and interface these needs to Telelogic. You should also support and introduce new methods and tools developed in the SDL Area into the User Projects. The Project Manager "SDL Support for NPU MSC" reports directly to the department manager.

For this position you need a 'driving' personality, AXE background, design experience with PLEX (practical SDL is a merit, not a must) and networking skill (Network within MSC and Ericsson is a merit).

Project Manager

Proj.No 65/E00

● "SDL Responsible for NPU MSC". The EED/X/I Project Manager "SDL Responsible for NPU MSC" is responsible to identify the needs from NPU MSC to further develop SDL, the needed tools and methods and relay these requirements to the appropriate authorities. You act as main interface for NPU MSC to SDL-SG, SDL-PM and other units using SDL and as "SDL Deployment Responsible" towards SDL PM according to role-description keep track of the SDL activities within NPU MSC. You have to identify which parts of the NPU MSC design world will benefit from the usage of SDL and in which parts of the design process SDL can bring additional benefits. You define strategies as results from points e and f and forward them to the appropriate authorities for approval. The Project Manager "SDL Responsible for NPU MSC" reports directly to the department manager and the SDL Steering Group. You must have a 'driving' personality, AXE background, design experience with PLEX or SDL is a merit (not a must) and networking skills (Network within MSC and Ericsson is a merit). You have a strategic way of thinking and fun in setting up plans.

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The Core Networks Integration and Verification Department (EED/S/T), part of the Core Network Integration Center, CNIC, is mainly responsible for integration, system test and industrialization of the UMTS core network. Additionally we verify new functionality in the GSM MSC on node level. We can therefore offer positions at the very front edge of technology in the field of mobile telecommunications. EED/S/T are looking for candidates to fill the positions of:

GSM SS/UMTS System and Network Testers

Proj.No 55/399

● These Testers are mainly responsible for test design and test execution needed to integrate and industrialize mobile telecom/datacom networks of the third generation. This involves node testing on AXE10, CELLO or JAMBALA platforms; network testing in a network containing C7, ATM and IP interfaces; trouble shooting, configuring and tuning the whole UMTS network. The test execution is mainly performed in target environment.

As a suitable candidate you have experience in software testing or design, preferably in the area of AXE10 based GSM systems; knowledge of Intelligent Network (platform, services or CAMEL) or charging or C7 Signalling is a significant plus. In the UMTS world testers will need more and more datacom knowledge. So people with experience in TCP/IP or ATM networks UNIX, Windows NT or other platforms; C/C++, Java or other higher programming languages are most welcome. In addition we expect good communication skills, openess, respect, initiative and reliability to work as an effective member in our project teams.

Contact: A. Demmig, +49 2407 575-366, eedade@eed.ericsson.se; HR, M. Helfrich, +49 2407 575-89447, Markus.Helfrich@eed.ericsson.se

Ericsson Systems Expertise Ltd. Dublin, Ireland

Systems Engineers

As the Product Owner of the Mobile Radio Subsystems for both TDMA, PDC and with responsibility for the Radio Network Manager Applications developed for the PDC market the challenges and opportunities are many within the EEI/RJ department.

Self-Regulating algorithms being planned in the PDC system with impacts to both the AXE and the RNM SW, the Radio Network Solutions Centre in Dublin, Ireland, providing the full solution.

TDMA with the challenge of transferring the Product Responsibility to the LMC organisation over the medium term period at the same time as the work with introducing new radio network applications continues to impact the subsystem.

These challenges has made it interesting for our department to look outside the organisational boundaries for experienced, initiative taking, self-going people with at least 5 years experience in AXE development.

Your tasks as a part of the Systems Section would be in one of the two PDC products and would mainly consist of part taking in one of the Product Committees as a regular member together with Pre Study, Feasibility Study, system level investigations and maintenance support activities.

Experience from one or both of the systems (TDMA or PDC) in Operation and Maintenance, Radio Network Signalling and Connection Handling, Performance Handling and/or Protocol Handling for signalling to external platforms will be considered as positive. Also Object Oriented development and JAVA, C++, UNIX knowledge would be positive for the RNM Application position.

A Role as Set of Parts Responsible would be considered if it suits both parties, description can be found through the RNSCs IntraNet @: http://rnsc.eei.ericsson.se/index.shtml

Any questions will be answered by: System Manager, Peter Ostrup +353 1 207 70 76, e-mail – peter.ostrup@eei.ericsson.se

If you would like to apply for the position, please send your CV to Lorna.Mulvihill@eei.ericsson.se +353 1 207 7986 before 22nd December 2000.

Within the Core Network Integration Center, CNIC, at EED, two Support Project Offices are looking for the following candidates:

Project Manager

Proj.No 106/E00

● The Core Network SW Support Office at EED is looking for a Project Manager to co-ordinate and drive the development of Remote Upgrade and Update worldwide. The work will be executed in projectform, closely linked to the CN Supply projects (presently R9). The coming CN UMTS applications will also be included in the scope.

The position will report to the overall Remote Co-ordinating function at ERA Strategic Product Management (SPM). The remote handling is the vital method for the SW roll-out of todays incrasing amount and size of mobile networks.

Qualifications: Solid experience in the Support and Project Managament areas. Ability and willingnes to work with and drive GSM global Support and Supply organisations towards full deployment of the remote concept. Resultoriented.

Contact: Soenke.Nielsen@eed.ericsson.se, +49 2407 575-343, HR, Markus Helfrich, +49 240 575-89447, Markus.Helfrich@eed.ericsson.se

UMTS/CN Software Support Project Managers & Quality Managers

Proj.No 126/E00

● The Core Networks Integration Centre (CNIC) is seeking Project- and Qualitymanagers for the CNM Software Supply & Support Project Office, EED/S/Y. We are responsible for all projects for 2nd and 3rd Line Support and Product Line Maintenance in UMTS Core Networks. Right now we are in the process of establishing and preparing Support for UMTS.

We need you to set up and define projects under the total scope of 'UMTS Support'. As a suitable candidate you have several years of Ericsson experience with good competence in the area of Maintenance and Modification Handling, AXE Support, and you have worked with customers in 2nd or 1st Line Support.

You possibly have project or line management experience and are familiar with SW Support processes. You should have experience in either Configuration, Product and/or System Management in AXE. Any experience with the new UMTS platforms is a clear advantage.

The work involves continuous contact with various internal Ericsson functions, both technical and commercial. Close cooperation with PLM, ASO and SA-FSC organisations as well as all other Node Product Unit Support Project Offices. You will need to closely monitor and report the status of projects activities. Innovative and proactive solution-seeking skills are essential, as is the drive to deliver results. Improvement of methods and quality to support the processes used in the projects is part of your daily work.

In both of these positions you will need good planning, organizational, communication and cooperation skills. You should have a clear focus on customer satisfaction and enjoy working in a multicultural environment with a strong team-oriented spirit. Opportunities for travel, networking, personal and technical development are outstanding. Watch yourself make a global impact.

Contact: Jari Saarinen, Jari.Saarinen@eed.ericsson.se; HR, Markus Helfrich, +49.2407.575-89447, Markus.Helfrich@eed.ericsson.se

The section EED/S/L is responsible for the Product Line Maintenance (PLM) and takes central maintenance responsibility for the Worldwide CME20/GSM Switching System, it is considered as the primary competence center for CME20/GSM Switching System and will take central maintenance responsibility for the new UMTS MSC Server in April 2001.

Within EED/S/L, the 'Core Network Help Desk' migrates to provide 3rd line technical support for the Supply & Support organization of Ericsson's Core Network in 2G and 3G Mobile Systems. The Help Desk is regarded as primary competence center for GSM Switching System support. Due to the increased responsibilities and coming UMTS releases the Help Desk need also to cover activities for the GPRS nodes, MGw node as well as ATM switching.

Experienced Troubleshooters UMTS

Proj.No 46/399

● You will be actively involved in the Product Introduction of UMTS / GSM Core networks and FOA activities worldwide, like on-site support. You will handle emergency situation on Core Network Products towards UMTS / GSM customers and the UMTS / GSM support organization, like hot TR Troubleshooting and customer escalations. As member of the 'Key Competence Center' for Core Network Products you will give technical consultancy towards the customer and the support organization.Routine work like technical studies, testing activities and work on ISP and QoS activities will conclude the big variety of the job.

You should have good testing or Troubleshooting background in one of the areas GSM on AXE 10 platform, GPRS nodes, ATM switching and protocol or TCP/IP protocols.

You should have a determination to tackle problems and be able meet new challenges. Willingness and ability to travel to customer sites is expected. An open minded and flexible attitude and the ability to work well in a team environment are important personal qualities. You should also show good written and verbal communications skills.

Contact: Dieter Ahlers, +49 2407 575 404, Dieter.Ahlers@eed.ericsson.se; HR, Markus Helfrich, +49.2407.575-89447, M.Helfrich@eed.ericsson.se

Experienced AC-tester

Proj.No 47/399

● for global support of the NO.1 AXE Application. The product line maintenance section takes central responsibility for the world wide CME20 switching system. It is considered as the primary competence center for CME20 SS.

Requirements: testing/verification, PLEX and ASA experience, test system knowledge, IN and tool experience is an advantage, to be flexible and able to work under pressure, to be self-motivated, to work easily on your own and within a team and to achieve goals and customer requirements.

You should have at least 3 years of testing experience in AXE mobile switching. Your main task is to test the correction in all the releases R7, R8, R8s, PRA, HWM, use test system to trace the problem in test channel and transfer your knowledge to less experience people in the group. Travelling at short notice as an integral part of the job.

Contact: Uwe Scheunemann, +49 2407 575-412, Uwe.Scheunemann@eed.ericsson.se; HR, Markus Helfrich, +49-2407-575-89447, Markus.Helfrich@eed.ericsson.se

Experts in Remote Function Change 3rd Generation, UMTS

Proj.No 193/E00

● Remote are the mandatory methodes for upgrading and updating of AXE based nodes. All future UMTS nodes have the same requirement on remote update and upgrade facilities.

CN Maintenance and Support in EED has set up a team that is responsible for the Subroutines and Main Script developement, verification, maintenance, TR Handling and Data Base Maintenance of Subroutines, WWW, Documentation, Process and Competence development, On Site Support for Remote Upgrades and coordination of activities with BSS, CMS88 and Wireline. To cope with these new tasks we need you and your expertise. We need Remote Scripting experts that know about AXE from FSC and customer point of view and that know about Function Change and package loading. We offer the possibility to prepare the future UMTS nodes in respect to their upgrade and update handling in the field. If you see your future in improving the Remote Idea in Ericsson, then come to the Core Network Upgrading and Remote team.

Contact: EED/S/L, Johann Boettcher, +49 2407 575-89420, Johann.Boettcher@eed.ericsson.se; HR, Markus Helfrich, +49-2407-575-89447, Markus.Helfrich@eed.ericsson.se

The Core Networks Configuration Management Department (EED/S/O) is part of the Core Networks Verification and Integration Centre (CNIC). The department is responsible for test configuration management (TCM) for Core Networks verification projects and NPU-MSC function test (FT) and verification projects. We are presently seeking candidates to assume the duties of:

INDUS & TCM Project Manager - UMTS CN 1.5 / 2.0

Proj.No 104/E00

● Your main tasks are planning and coordinating all TCM activities for the function test and CN verification projects. These activities include completing the TCM Feasibility Study, and coordinating the TCM/CM activities of Data Transcript, Dump Assembly and Test Network Configuration, GAS Specification, Program Production, Parameter Administration, MHO Administration, Library Specification and Production, and Ericsson ClearCase configuration, alignment and support throughout the project. Coordination with other CN TCM organizations is required to secure accurate deliveries to CN verification. You will work closely with the SS Node and CAPC design, function test and verification project leaders as well as the overall UMTS CN project manager. You will be responsible to guide the TCM project from the start of FT through to GA of the release.

You have competence as designer, tester, or in TCM, have previous line or project management experience (desirable), have strong organization, planning, coordination, and communication skills, can actively drive requirements and seek solutions to complex problems.

System Test Plant Account Manager

Proj.No 195/E00

● As a System Test Plant (STP) Account Manager you will report directly to the department manager. You will be responsible for the tracking, follow-up, and status reporting for the largest cost center budget at EED.
You will need a good understanding of the distribution of EED STP's to our development, verification and support projects. Test or project support experience within EED project is desired. Proactive problem solving skills, good organization and communication skills and the ability to comprehend, formulate and follow up budgets and purchases is required.

Your tasks will be, to schedule the STP's to our ordering projects, host the HW Coordination Forum where STP customers (project&line) meet to review and align STP HW requirements.

You will also prepare budget input for estimated STP hours to be invoiced, HW to be purchase and expenses incurred in the operation of the STP. Follow up and report monthly the status of the budget with respect to fixed asset purchases, expenses, STP use and invoiced STP hours - follow up and make visible the status of prototype STP hardware ordered through the development and verification projects for use in the EED STP's.

Contact: Charles D. Grinstead, +49 2407 575 341, eedcgr@eed.ericsson.se; HR, Markus Helfrich, +49.2407.575-89447, Markus.Helfrich@eed.ericsson.se

The EED/S/K Methods and Tools Section works on support as well as in test tools and methods. To support our further activities we are looking for

Software Designer

Proj.No 23/E00

● Your main task will include Software-development for a tool for end-to-end testing of mobile phones and switching systems. The tool controls mobile phones and an air interface simulator, and offers a uniform and generic interface for automatic execution of mobile phone/switching systems tests. Software development is currently done in Erlang, C++ and Assembler. Software is developed under UNIX, target systems are UNIX workstations and special purpose hardware.

Suitable candidates have a degree in computer science or electrical engineering and have good experience in C/C++ programming. You should also be familiar with UNIX, realtime/embedded systems as well as with networking and protocol software. Former experience with Assembler and /or Erlang programming is beneficial.

Senior STE Methods and Tools Engineer

Proj.No 04/339

● The STE Methods & Tools group is responsible for all STE activities within SS OPERATIONS in the area of Function Test, Design Maintenance, PLM, System Test, support organizations (ASO/SAFSC) and longer term Methods & Tools issues affecting testing. This central group will not only cover EED needs, but also all the other LDC's. The focus is on STE (Simulated Test Environment) tools and protocol and traffic simulated tools that can be used in both STE and target environment (ex. MGTS, TSS 2000, TTCN, etc.).

As a suitable candidate, you are an Ericsson employee and should have experience in AXE 10 testing. You should be able to work well on a highly motivated team and under strict time pressure. You also have to be service minded, be willing to travel and be prepared to quickly take new assignments. You have to be critical and always want to have the urge to improve the simulated testing environment. You have to be open minded and willing to change in order to drive the simulated environment into the third generation mobile application systems.

Your responsibilities will include coordinating STE testing activities, gathering requirements from the customer, being involved in writing and coordinating new requirements, investigating impacts from new functionality in GSM/UMTS applications, defining methods for how to test new features, acceptance testing of new tools and trouble shooting in the simulated environment.

More info: http://www.eed.ericsson.se/services/eed-x-s/o/soz/Welcome.html.

Contact: Samir Douik, +49.2407.575-6501, Samir.Douik@eed.ericsson.se; HR, +49 2407 575-89447, Markus.Helfrich@eed.ericsson.se

MOBILE APPLICATION

The Application Design department in the Mobile Data Networks Unit works with development of mobile datacom applications. The first work in the application design area was started in spring 98 and the first product release was done in February 99. The product was the WebOnAir Filter Proxy.

The WebOnAir Infoserver is perceived as one of the most important and promising product within the PU MIAp. The chances are quite high that the InfoServer will be part of the core infrastructure for Ericssons world wide mobile portal called e-mode. With the first version - being released just now - we'll have a stable base to continue and to become "the" engine for the mobile portals. Therefore the infrastructure has to be further developed and lots of new features have to be added, e.g. Mobile Positioning Interface, e-commerce Interface, SDK development, Technical Support of customer projects, O&M features, e-mode capabilities, Voice recognition. Because of this long list our team has to and wants to grow significantly.

Project Manager the WebOnAir Streaming Proxy

Proj.No 24/M00

● The task of the project manager is to setup the development project for the WebOnAir Streaming Proxy, which is run in a co-operation between the Application Design and the Research department. The Feasibility Project will be launched in January 2000 and a TG2 decision is planned for February 2000. The first version of the proxy shall be released end of 2000.

The task of the project manager will be to define the project and to participate actively in the technical investigation during the feasibility study. Thereafter he will have to manage the design project, which will be run in close co-operation with the Strategic Project Manager and the ordering PU. During the whole project good technical understanding of the product is required and technical work will be a substantial part of the task.

An ideal candidate has some years of experience in software design on standard platforms (UNBIX, Windows) and very good knowledge of standard programming languages as C/C++. Any other competence in SW technologies and datacom is appreciated. Experience with project management ala Gilb is of advantage (Evolutionary Design). Experience in guiding small teams is of *advantage but not a requirement.*

The position holder reports directly to the manager of the Application Design Department and to the Total Project Manager at the PU Mobile Internet Applications.

For more information: http://gprs.eed.ericsson.se

Contact: EED/D/FC, Ralf Wellens, +49 2407 575 182, eedraw@eed.ericsson.se; HR, Simon Seebass, +49.2407.575-163, Simon.Seebass@eed.ericsson.se

The EED/D/V section is responsible for Verification and Maintenance of the Ericsson Global Packet Radio System. We host projects for node and network verification prior to system release and take care of GSN node and network maintenance after worldwide availability. Our vision is to take responsibility in network verification of mobile datacom networks. In order to strengthen this network competence we are looking for

TCM GSN

Proj.No 75/E00

● The TCM group is responsible to maintain the complete GPRS network. This includes MSC, BSC, GSN, different backbones like ATM or FrameRelay, the mobiles etc. The Planning of different network configuration and interface function to the units responsible for the single nodes is included in the task. As a GSN responsible, your task is to set up and configure the GSN and to support the network verification test activities. You have a solide background in UNIX (eg. as a system administrator), and good experience data communication (IP, ...). You should be team oriented, have the ability to work under pressure and be supportive.

Ericsson welcomes you to join the exciting telecommunication market of Taiwan.

Taiwan continues to be one of the fastest growing markets in Asia Pacific. With a mobile user base approaching 10 million subscribers or 45% penetration, Taiwan will be one of the leading countries to enter into the next generation of broadband wireless access.

Ericsson Taiwan welcomes you to join the exciting telecommunication market of Taiwan. The FarEasTone (FET) customer account is one of three mobile accounts at Ericsson Taiwan and supports the Northern region dual band GSM network. The customer is part owned by AT&T and is one of the biggest network (3 million customers today) in Asia. Far EasTone's core network is entirely supplied by Ericsson, and includes MSCs, TSCs, BSCs, HLRs, As well, FET have successfully launched ISP, Portal, and WAP services to the market, and have implemented a GPRS test system, with a commercial GPRS system planned for this year. They are pursuing 3G and are today investigating and investing in wireless Internet applications, mobile positioning, e-commerce, and enterprise services such as GSM on the Net.

Network Engineer for the Mobile Core Network

Job Description

With the wave of new applications that are being connected to the core network (e.g. WAP, GPRS, MPS), you will be responsible to calculate and communicate the impact to FET. While detailed network planning is generally not required, knowledge of network planning principles is necessary, as there are occasions when some network planning is required.

At times it is required to support Tenders/proposals that are being submitted to FET. Generally this is network impacts and dimensioning of the nodes/system being offered.

With FET looking at migration options for 3G, Ericsson is part of assisting them with the best way how to do this. So the role has developed into some sort of "an expert" regarding the core network, being able to guide FET in the right direction, especially with all the new services.

You have good interpersonal skills, as frequent communication with FET is necessary. English skills are necessary, and Mandarin Chinese is a very good plus. Ideally you will also have knowledge of Ericsson's core network products, and knowledge in datacom related areas (such as ATM, IP).

Contact

Ben Cheung, Chief Engineer, Network Engineering, +886 2 2746 1769,
E-mail: ben.cheung@ert.ericsson.se
Jonas Ericson, Network Quality and Performance Mgr, +886 931 385 063,
E-mail: jonas.eriksson@ert.ericsson.se

GSN Product Manager

Job Description

As the GSN product manager, you will be responsible for the GPRS product management. The main tasks include product presentations, Marketing and Sales support, GPRS product dimensioning, strategy and solutions. You will work closely with our local business and project managers.

You should be proactive and take initiative on your own. Fluent speaking and writing in English is a must, and Mandarin Chinese is a plus. You should have at least 2-4 years of relevant experience in product management. You should ideally have extensive experience in the area of GSM with knowledge in SS, BSS, transmission, and datacom related areas including ATM and TCP/IP. A good knowledge of GPRS is an advantage.

Contact

Nihar Chand, Office: +886 2 2746 1669, Mobile: +886 931 162 539,
E-mail: nihar.chand@ert.ericsson.se

Product Manager, Wireless Internet Application

Job Description

You will be part of BM Applications & Servers team to identify customer needs and potential opportunities and to be responsible for promoting and managing products and solutions in the area of wireless Internet applications. Examples of solutions we are working on now are the emode portal, WAP, Positioning applications, Mobile Epay, GSM on the Net, GSM Pro, iPulse, etc. You will enjoy and continue to build the close relationship with the customer of one of the world's biggest dualband (GSM900 and GSM1800) systems solely supplied by Ericsson. You will further on develop the business and product knowledge at both the customer and at Ericsson Taiwan.

Profile

You have at least 3 years of experience in telecommunications or datacom. GSM knowledge is preferred. You have at least 1 year of experience in relevant end-user applications within Ericsson. You have experience of customer relations in both pre- and post-sales. You are independent, self-motivated, analytical and business minded. You have excellent communication skills and English speaking and writing skills. Mandarin Chinese is a plus.

Contact

Ryan Chen, Director of BM Applications & Servers, Mobile: +886 916 261 798,
ECN: 888 1798, E-mail: ryan.chen@ert.ericsson.se

3G Product Manager

As part of the Business Development unit in Ericsson Taiwan, your responsibilities will include managing and tracking the development of technologies leading up to 3G systems, including, GPRS, GSM on the Net, EDGE, WCDMA and CDMA2000. You will also provide all technical and marketing support related to 3G activities including standardization, bids and proposals in Taiwan. Your job will also entail giving presentations towards Ericsson and non-Ericsson accounts, government bodies and other institution on the merits of Ericsson 3G solutions.

You should ideally have extensive experience in the area of GSM or TDMA with knowledge in SS, BSS, transmission, and datacom related areas including ATM, GPRS and TCP/IP.

Contact

Young Lin, Sr. Director, Mobile: +886 930 887 037,
E-mail: young.lin@ert.ericsson.se

Business Manager – Services

To manage and coordinate the business development activities of the Services towards major customer in order to achieve the Services Business sales and orders objectives. Develop and manage the business relationship with the key decision makers in customer organisation relevant to the services business. Manage the relationship towards the internal Services Supply Units and towards Customer Services in the DGS and DIA organisations. Participate in the development of the Services business strategies and plans for the next 3 to 5 years. To provide value-added services solution toward operator customers. To develop and execute the entire sales projects, including market planning. Transfer knowledge and competence to local staff. University graduated or above, majors in Telecom., EE, CS or related fields. MBA is preferred. Min. 3-year sales experience in IT, Datacom, Telecom. or related field.

Contact

Ravi Kumar Makani-Chandra, Senior manager - Customer services, +886 931 162521,
E-mail: ravi.kumar.makani-chandra@ert.ericsson.se

WAC Manager

Ericsson Taiwan has recently launched an initiative to develop and promote the widespread use of Mobile Internet Application in Taiwan. The Wireless Application Center (WAC) will host all of Ericsson's local and global initiatives regarding the next generation range of services. A small test and verification laboratory has been set up, which consists of GATEs, IP routers, ATM switch, Wireless LAN and WAP system in WAC.

As the WAC Technical Manager you will be responsible for the overall technical issues including technical consultanting to the WAC members. You will lead a small team in problem-solving and project management with local application developer.

You should have at least 2-4 years of relevant experience in application development and project management with very strong communication skills and an open mind. Experience of working with Ericsson Development Zone is a plus. General knowledge of Ericsson products and strategic direction is required.

Contact

Kevin Shao, Sr. Manager, +886-2-27461749, +886-931 162 555
E-mail : kevin.shao@ert.ericsson.se

Engineer, CME20 System Support

Taiwan is a fast growing market, where the operators are competing with new services. This put an extra effort on the support department, we have to gain the knowledge of new products at the same time as supporting the core AXE network. What we are looking for is an experienced CME20 troubleshooter, willingly to work both with AXE and newer products.

As a part of the network support group, you will work closely with the customers and support them with SW trouble shooting, both as an individual and as a team member. APZ/IOG recovery, trouble report handling and transfer of know-how to local engineers and customers are also part of the work.

We would like to see that you have a good AXE knowledge and have at least 3 years AXE SW experience in CME20 SS, additional knowledge of CME20 BSC is seen as a big advantage. You have preferable worked in a support environment before with customer contacts. The position requires a good customer orientation, teamwork and good English knowledge.

Contact

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ERICSSON

Configuration Manager (technical)

Proj.No 06/E00

● The challenge for configuration management is to keep control over all objects which are produced and used during the software life-cycle. This includes source code, executables, released products, trouble reports, requirements, test data, third-party products.

Technical means to support configuration management are special databases (CVS, RCS, ClearCase). These provide the basics to differ between versions of objects. Tools like labels, triggers, branches, views etc. help to keep the different version under control. Through scriptsthese tools become a powerful instrument to control projects and products.

For persons interested in technical CM, we provide a good opportunity to quickly speed up in a technically skilled team and take over own responsibility after a short time. We are working with future-proof technology. ClearCase, MultiSite and DDTS (ClearQuest) are not only Ericsson's choice for configuration management but industry's standard. Perl, a scripting language we use to adapt the tools to our needs, is the most popular programming language in the WWW.

Persons interested in this field should have a structured and disciplined approach to tackle problems. The ideal candidate has an understanding of software development. Background in UNIX and scripting languages is a plus as experiences with any kind of configuration management tool.

Contact: EED/D/V, Hans-Thomas Kommer, +49 2407 575 446, Thomas.Kommer@eed.ericsson.se; HR, Simon Seebass, +49.2407.575-163, Simon.Seebass@eed.ericsson.se

BSS Test Expert

Proj.No 03/E00

● For this position we are looking for a skilled technical person with at least 3 years Ericsson experience in the verification or maintenance of GSM BSS nodes. You will be working in a BSS core team providing the competence to drive our datacom verification activities to success.

Activities in GPRS Network level Testing are interface verification, integration of BSS, trouble shooting on BSS with focus on the packet switching part, Supporting integration of mobile terminals into the network.

As an ideal candidate you have worked with verification or maintenance of the BSC. Your sound knowledge of the BSS system enables you to work independently. You understand the basic elements of the GPRS network and you are willing to expand your competence area with mobile datacommunication. You have experience to share your knowledge with new colleagues. Change is normal to you on your way to identify solutions.

Contact: Thomas Busch, +49 2407 575-178, eedthb@eed.ericsson.se; HR, S. Seebass, +49 2407 575-163, Simon.Seebass@eed.ericsson.se

CAPC SYSTEMS

The new international CAPC organization currently encompasses 20 design centers with the overall responsibility allocated at Ericsson Eurolab (EED) in Herzogenrath-Aachen, Germany. A total of 1.900 employees worldwide are responsible for the development of Transit & Network Access applications with focus on mobile telephony. CAPC serves the Product Units for UMTS, GSM, PDC, TDMA, NMT and all Fixed Local and Transgate systems.

Group Manager System Integration Test, 3G Systems

Proj.No 47/M00

● The general responsibility of the group manager is to plan, lead and supervise the operations of the group in EED/U/V. He/she has to guarantee that the required goals are fulfilled, the needs of the company are satisfied, the group is efficient and competitive.

The main authorities and tasks are to supervise testers and test leaders involved in CAPC subprojects, to participate in improvement of test methodology, to assure that all communication is executed with highest integrity and quality, to implement personnel policies and general rules, to perform appraisals and frequent personal development talks and to participate in recruitment and introduce new personnel. You provide the department with resource plans and forecasts, coach individuals and participate in the EED/U/V Management Team.

As a suitable candidate, you are an Ericsson employee and should have a minimum of 4 years experience in AXE system test or function test. Managerial experience (e.g. as group manager, team leader or project manager) is a clear advantage.

System Trouble Shooters, 3G Systems

Proj.No 67/399

● The Verification Department in CAPC International Operations at EED is looking for a system trouble shooter. CAPC serves the Product Units for UMTS, GSM, PDC, TDMA, NMT and all Fixed Local and Transgate systems.

Your main authorities and tasks are to perform analysis of complex system faults and find a solution for these faults, on site support at different CAPC development sites and support project management in technical issues.

As a suitable candidate you have excellent knowledge in AXE and detailed knowledge in at least one mobile application, you are flexible, show initiative and have good communication & cooperation skills.

The ability to work under pressure is also an important personal quality.

Experiences from System Verification, Trouble shooting and/or Customer support are a clear advantage.

Test Environment - Engineers and Project Coordinator, 3G Systems

Proj.No 181/E00

● The Test -Environment and -Methods-Team is part of the CAPC verification department, which is in charge of CAPC verification management including test coordination of CAPC projects, system integration test of CAPC products and the responsibility of the CAPC test environment and test methods.

The "Test -Environment and -Methods Team" should support CAPC projects with Test Environment (TE) issues, this means mainly to take part in feasibility studies and provide support for STE and traffic tools. (MGTS, SCS/TTCN, SEA).We are also responsible for the long term Test Method and Tools strategy in CAPC (test improvements) in cooperation with the Ahead project.

Your main authorities and tasks are to coordinate activities in the Simulated Test Environment (STE) and target environment for CAPC projects, to run trials for new test methods, to run system and verification tool studies for the requirement handling, to support test tools and to support project management in TE issues.

As a suitable candidate you have good knowledge mobile telephony systems, you have function test or system test experience for AXE products, you are flexible, show initiative and have good communication & cooperation skills.

We are working in a small team, which means you must be able to handle different tasks in parallel. Experiences from STE test-tools and traffic generators (MGTS, SCS/TTCN are a clear advantage

Contact: Anneli Oscarson, +49 2407 575191, Anneli.Oscarson@eed.ericsson.se, Franck Emerich, +49 2407 575-7700, Franck.Emmerich@eed.ericsson.se, HR, Simon Seebass, +49 2407 575-163, Simon.Seebass@eed.ericsson.se

Senior Systems Designer, 3G Core Networks

Proj.No 39/E00

● At CAPC Systems Management we perform system studies in early phases of product development of the next generation of mobile (3G, UMTS) and fixed network solutions (Engine).

An important aspect is to find synergies and to identify core application solutions between mobile and fixed systems. The type of work requires the ability to work in teams as well as individually.

We are looking for an experienced System Designer to participate in the early phases of Next generation solutions. Next generation solutions are based on packet switching (IP and/or ATM), thus competence in those technologies is requested. The signaling area, with interworking between classical SS7 based signaling and IP based protocols such as H.323 and SIP, as well as ATM signaling, is of particular importance.

Experience in AXE design is a definite advantage, but not a requirement. Some travelling is expected and English is the language used.

Systems Designer, Circuit Switched Data

Proj.No 40/E00

● The industry is currently undergoing an extremely interesting phase, in which more and more datacom applications are becoming available in wireless networks.

Wireless Internet with WAP is of course the prime example. Wireless access packet technologies are not yet mature enough to compete with Circuit Swicthed Data. CSD will grow in importance, and will proliferate in 3G/UMTS based networks for a number of years.

We are looking to strengthen our competence in the area of datacom in general and CSD in particular. A few years of relevant experience is required.

Experience in AXE design is an advantage, but not a requirement. Some travelling is expected and English is the language used.

Systems Design for In-Service Performance in 3G Core Networks

Proj.No 41/E00

● In-Service Performance deals with Availability, Reliability and Usability of a system or service. There is an ever growing demand from customers on improved ISP. This demand has resulted in an increased focus on ISP internally in Ericsson and CAPC has identified ISP improvements as one of the most important goals for the coming years.

Therefore, we need to strengthen our position in this field, and we are looking for ambitious candidates to take on the challenge of fulfilling the CAPC ISP goals. The work is performed both in teams (travelling is expected) together with colleagues from other Product Units, and individually.

The applicant preferably has experience in one or several of the following areas: Characteristics, Test, Maintenance and PLEX design.

Contact: HR, Simon Seebass, +49 2407 575 163, Simon.Seebass@eed.ericsson.se,

AHEAD Project Manager

Proj.No 13/M00

● The main responsibility of this position is to establish and run the CAPC Improvement Projects called AHEAD and hereby contribute to the operational excellence improvements of the international organization.

The main authorities and responsibilities are: Set up of AHEAD Projects, competence build up in all parts of the organization, coordinate with Commercial CAPC projects (wireline/wireless) which will deploy and implement the improvements, active involvement in benchmarking of improvements, participation in the CAPC Performance Management Network, Coordinate Activities with the SSES organization (Software and System Engineering Support), support the CAPC World Class Provisioning Manager in achieving the CAPC Goals.

The AHEAD Project Manager reports to his/her line manager and to the CAPC World Class Provisioning Manager.

Potential candidates shall have a sound background in wireless and/or wireline AXE or Open Platform SW development projects.

Any previous experiences with quality systems, processes and project management are appreciated.

The candidate needs to have strong leading and communication skills. Last but not least you should have a high interest in moving an organization AHEAD and see this position as an opportunity for improving our products and our ways of working.

Contact: Per Olov Lundblad, +49 2407 575-5383, eedpol@eed.ericsson.se; HR, +49 2407 575-163, Simon.Seebass@eed.ericsson.se

Performance Manager, Sub Core Product Units (sCPU) Datacom and FCAPS

Proj.No 18/E00

● The sCPU Performance Manager will work close to the sCPU Manager as well as to the PA's and DU's. He/she will be the interface between Performance Management (Quality, Methods, Tools, CM and WCP) and the sCPU.

The target is to drive improvement work within one sCPU. You will communicate and follow up improvements within the sCPU.

You are an active participant in the CAPC Performance Management Network as well as in the sCPU Management meetings and be responsible for measurement of sCPU performance. You will also assist the goal setting for the sCPU.

Qualifications: BS EE/CE/CS or equivalent. At least three years experience from improvement work, quality management and/or project management. Project Management skills. Excellent communication and interpersonal skills. C/C++ knowledge desired for Datacom and FCAPS. Fluency in written and spoken English is required.

Contact: Anna Ringquist, +49-2407-575 8052, Anna.Ringquist@eed.ericsson.se; HR, S. Seebass, +49-2407-575 163, eedsims@eed.ericsson.se

System Manager + Transit

Proj.No 81/399

● The main target is to provide technical and system competence to preserve the Transit development in the Application Core (CAPC).

Your main tasks would be to perform system studies or design in before or in early project phases, to provide technical expertise related to pre-study and feasibility study on Transit products, to provide technical and system competence to support the GSM, UMTS, TDMA and PDC product lines, to participate in pre-studies and feasibility studies for the Transit projects in CAPC, to .give support in the design activities in his/her area of competence, to give support to analyze trouble reports on system module level, to participate in RS and other technical inspections regarding his/her areas of competence, and to act as Technical Coordinator in Transit (sub)projects, coordinating technical issues involving several subprojects, involving the related mobile applications projects or involving associated projects.

Required qualifications are a strong technical background in technology, telecom or database industry with experience in AXE10 development and system design, good knowledge of mobile telephone systems. Able to take initiatives and work in a dynamic environment. Excellent communication and interpersonal skills.

Competence in one or more of the following areas is essential: AM System development , Signaling and Protocols, Traffic Control, (Wireless) Charging, ATM or SDL.

AXE10 Software Designer

Proj.No 60/399

● 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 performtechnical studies as well as preparing technical documentation.

A first experience in SDL would be an advantage. We are looking for a designer with 2-3 years of experience preferable in the AXE 10 area.

Contact: Joe.Wilke@eed.ericsson.se, +49 2407 575 399, Simon.Seebass@eed.ericsson.se, +49 2407 575 163

Group Manager Transit Development

Proj.No 177/E00

● The Transit Development Department EED/U/T is looking for a group manager to establish a new group for AXE10 SW development in the Application Core (CAPC).

The group will consist of 10-15 SW Developer that are working for the Transit subproject of CAPC and participating in system design of Transit-AM.

The Transit Development Department has the overall system responsiblities for the new Transit AM (TRAM) and the related products in the AXE10 MGW. TRAM is used as a core product in Ericsson's mobile systems UMTS, GSM, PCS, PDC, TDMA and WCDMA. Beside EED/U/T, Transit development is executed in ETK/Kroatia and TXM/Mexico.

The general responsibility of the group manager is to coach his group members and to plan and follow-up the operations of the group in EED/U/T. He/she has to see that the required goals are fulfilled, the needs of the company satisfied, the group is efficient and competitive.

Main authorities and tasks are: set-up and coach design teams, participate in improving the unit's performance, participate in the EED/U/T Management Team, ensure that planned quality assurance activities are implemented, implement personnel policies and general rules, perform appraisals and frequent personal development talks, plan and ensure competence development of the staff., provide the department with resource plans and forecasts.

As a suitable candidate, you are an Ericsson employee and should have a minimum of 3 years AXE-10 software design knowledge.

You should be familiar in working in projects. Managerial experience (e.g. as group manager, team leader or project) and experience in the transit area (e.g. TCS, TSS, CHS, TRAM) are a clear advantage.

The position requires high initiative and good communication.

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contact

November 2000

strategy

Moves for the future

SUPPLEMENT TO CONTACT – THE PUBLICATION FOR ERICSSON EMPLOYEES ALL OVER THE WORLD

ERICSSON

Three guidelines for winning the match

The world is now facing what may be the biggest business boom ever: mobile communications and the Internet. Together they make up the mobile Internet!

As the race begins, Ericsson has an extremely strong position. Whether or not Ericsson achieves its goal of winning the race depends entirely on us.

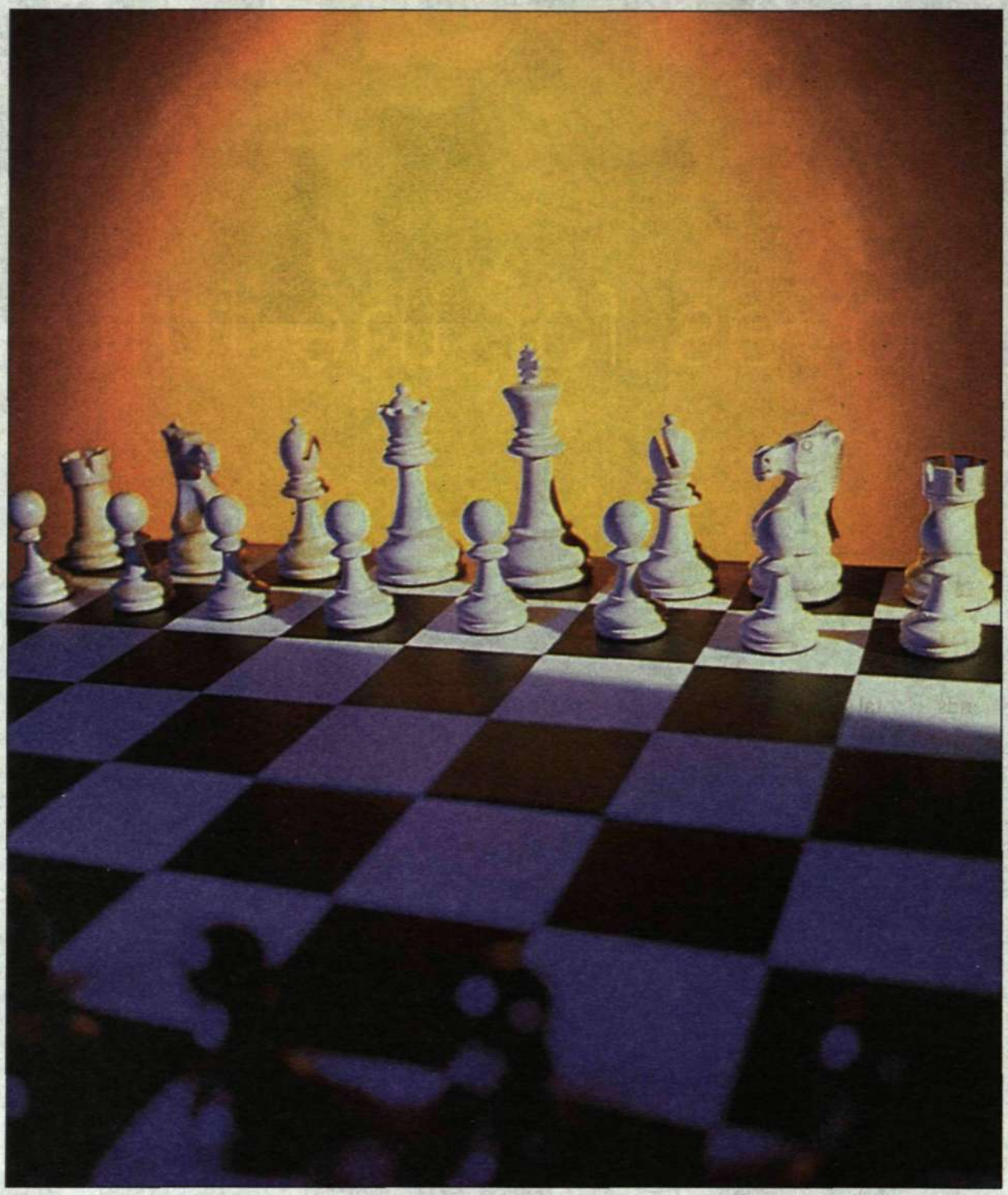

Photo: Antonio Rosario/The Image Bank

❖ Everything depends on the efforts of each and every individual within Ericsson. The possibilities are endless and we are positioned at a highly advantageous starting point.

We have the best technology and the best knowledge of what customers want, and we have a local presence all over the world to help our customers. This includes those who have won or will win 3G licenses and those who want to migrate their narrowband fixed networks to broadband networks using our ENGINE concept.

Right now, it is extremely important that we all work as a single company and that everyone is focused on and is working towards the same goals. Each and every one of us should have clear individual goals that, taken together, will help Ericsson achieve its goal.

The Ericsson Strategy Plan (ESP) is the primary tool for establishing the right goals.

It is extremely important that everyone in the company be aware of our strategy, goals and visions.

I therefore encourage all employees to read this Contact supplement. It provides a first glimpse of where Ericsson is going, what will be demanded of us to get there and how we will be the first to cross the finish line.

We will be first, we will be best and we will be most cost-effective!

This is how I summarize our strategy. These words should always be foremost in your thoughts, together of course with concern for our customers. Without customers, being first is naturally pointless.

With this qualification, I would like to explain what I mean by "first," "best" and "most cost-effective."

We shall be first...

Ericsson must be first-to-market with new solutions.

Our customers are facing a tremendous challenge in making the transition to next-generation communications systems. This includes both 3G in mobile communications and IP-based solutions for wireless and fixed networks, business communications, and so forth.

To be a winner in tomorrow's market we must be the first to launch new solutions.

When we reach the finish, we must have delivered what we have promised on the date promised. This is our greatest challenge right now. Delivering the best solutions three months late will never make us a winner.

...best

Focusing on being first does not mean that we can disregard quality, although we must understand how important it is to quickly launch new solutions.

Ericsson is recognized for its superior technical expertise. Now we are also going to be the best by delivering on time with excellent quality.

...and most cost-effective

Ericsson's financial results depend in large part on how well we then succeed in being effective. By being first with the best solutions, we lay the foundation for an effective cost structure.

TTC and other corporate initiatives serve the multiple purposes of making us both faster and more efficient. The rollout of TTC must therefore continue to receive high priority.

In tomorrow's extremely competitive and complex market, Ericsson must have clear guidelines for how we should prioritize our efforts and resources.

With ESP as a compass in our daily work and with a focus on being first, best and most cost-effective, we will be the winner.

I know that you, just like me, are driven by a strong desire to win.

Kurt Hellström, President

Photo: David de Lossy/The Image Bank

Sharp focus key to success

The large operators are becoming ever larger. At the same time, different access networks are being linked together and demands for total solutions are increasing.

"Being the leader requires focusing very strongly on the large operators. This, in turn means a fundamental change in how Ericsson works," says Torbjörn Nilsson, Senior Vice President for marketing and strategic business development.

❖ The telecom market continues to change dramatically. Operators are now merging at an increasingly fast pace as a result of globalization. This is most evident in wireless, where enormous license fees are being demanded in many countries for third-generation mobile telephony.

"In wireless, there are currently about 500 major operators. Six of them have 34 percent of the world market. In a few years, the 10 to 20 largest operators will be even more dominant," says Torbjörn Nilsson.

Global operators drive the market

"This affects our entire business strategy," continues Torbjörn Nilsson. "Operators not only purchase systems and infrastructure, but also applications and most of our terminals. With the major shift in technology that we are facing with the move to 3G and Mobile Internet, concentration among operators will increase.

"Over the next few years, it will be very much the global operators who drive the market by demanding total solutions," says Torbjörn Nilsson.

For Ericsson, this will require a new business logic in which the marketing dimension in particular is affected.

"Today Ericsson is basically organized by countries. This is not efficient if we want to focus on the large global operators. A review of this organization is in progress, and adjustments will be made over the next two years."

Strategic campaign

The transition from circuit-switched voice traffic to mobile Internet and the new fixed multi-service networks will also affect Ericsson's production and development.

"In marketing terms, things are going well," says Torbjörn Nilsson. "What we need to do now, however, is to ensure that all our development work, product provisioning and implementation is on the same track."

The extensive branding campaign for mobile Internet that Ericsson launched recently is extremely important for emphasizing and strengthening the company's leading role in this area.

"Many countries are now in the process of choosing 3G operators, and as we roll out new services, such as GPRS, we have to stick out our necks and show that we are strong," says Torbjörn Nilsson.

"The campaign, which is aimed at the general public, is intended to tone down the technology and show that it will become a part of everyday life in the future. We can demonstrate this in practical terms with everything from new products like the R380 phone to new systems and applications. They all go together, and that's what makes our offering unique," observes Torbjörn Nilsson.

The technology shift in which mobility is being joined with the Internet will affect Ericsson on all levels. In one sense, Ericsson to date has only had one single but extremely strong application – voice using circuit-switched telephony.

New demands to fulfill

"We will now have many new mobile services, such as e-mail and SMS, but also the ability to send and receive video and music over the network, as well as new positioning and payment services. This will place new demands not only on how the infrastructure should handle these services, but also the design and function of terminals," says Torbjörn Nilsson.

Ericsson's six divisions for all products and services constitutes a clear division into areas of responsibility and provides a path leading forward.

"The company's bread and butter is very focused on access networks for fixed and wireless systems, but to leverage these products, we must have access to total solutions for the customer that include new backbone networks, as well as terminals and applications," says Torbjörn Nilsson.

Business customers lead the way

Business customers are a very important group which is handled by Enterprise Systems separately from the six divisions.

"Slightly more than 50 percent of the operators' revenues relates to the business market. It is extremely important that we help operators to support these customers, who are also among the early adopters of new services," concludes Torbjörn Nilsson.

Nils Sundström

FACTS/**GOALS FOR MARKET POSITION**

Ericsson's goal is to grow faster than the market. This means growth of more than 20 percent per year, according to current forecasts. The strategy plan includes a number of financial goals for Ericsson's market position in 2003. Ericsson shall be:

- Leader in systems for mobile Internet, including both 2G and 3G systems, with a market share of at least 30 percent.
- One of the two leading suppliers of mobile terminals with a market share of about 20 percent.
- One of the three leaders in carrier-class multi-service networks. For migration to the new packet networks, Ericsson should have a market share of 45 percent, while the market share for broadband access networks should be nearly 20 percent.
- Number one in sales of services to operators with a market share greater than 20 percent.
- A leading supplier of solutions and services for the new networks, with both proprietary applications and applications from third-party developers.

FACTS/**SUCCESS FACTORS**

There are three critical success factors which Ericsson must pinpoint over the next three years:

- Focus in marketing on the largest operators.
- Focus on development, production and implementation of products for 3G and new fixed multi-service networks.
- Focus on terminals for mobile Internet and 3G.

Everyone needs partners

Photo: Dominic Rouse/The Image Bank

New services and open standards are crucial for success in mobile Internet and new multi-service networks.

Ericsson is therefore investing large sums in research and development, but also working closely with a number of partners. This is an important part of its strategy for supplying total solutions.

✣ "We will not be able to develop everything ourselves. In some cases, we must work with partners, while in other cases we will acquire companies to be able to supply total solutions," says Torbjörn Nilsson.

Ericsson's strength lies in combining mobility in the network with the Internet and what are called carrier-class characteristics, such as reliable networks, security and excellent quality for real-time services.

"Our basic strategy is a continued strong focus on research and development activities," says Torbjörn Nilsson. "This is fundamental for Ericsson and also a prerequisite for leading standardization work. That's not enough, however. We are going to need a number of strategic partnerships. This applies to components, where we are working with Texas Instruments, for example, and most IT companies, including Sun, HP, Compaq and Microsoft in various constellations."

Cooperation and competition

An evident change in recent years is that the same companies can be partners in one area and competitors in another.

"This is something completely new. Previously, you were either a partner or a competitor, and that applied on all levels. We no longer live in that kind of world," says Torbjörn Nilsson.

Ericsson is also focusing heavily on third-party development and production and has a number of research centers around the world. In addition, thousands of other companies can obtain support using the simulation tools and training that Ericsson provides on the Internet to enable companies to test their own WAP or Bluetooth products, for example.

"We own more than 30 percent of the world market and are thus the dominant player in mobile communications. This is particularly evident in the large number of parties that wish to work with us – a tremendous advantage if we can take advantage of these partners in the right way," says Torbjörn Nilsson.

To encourage new companies in the mobile Internet area, Ericsson is also a part-owner in three large investment funds around the world.

"We can also make direct investments to acquire a minority share in companies that are attractive in Ericsson's long-term core business," notes Torbjörn Nilsson.

Company acquisitions

Company acquisitions, such as the recent purchase of the US company Microwave Power Devices, are important in helping Ericsson win time and acquire critical expertise. During 1999, Ericsson made a number of major acquisitions, particularly in datacom. These investments now make up the Data Backbone and Optical Networks division.

"The entire mobile network is moving toward an IP-based solution. This means that we will have router functionality all the way out to the base stations," notes Torbjörn Nilsson.

"Currently, development of our own products for the mobile access networks is strong. In backbone networks, we have a strategic partnership with Juniper for gigabit routers, and we are also part-owners in that company," he continues.

"In ATM, we have an excellent product in the AXD301, which is an important part of the ENGINE concept. ATM is currently the only technology that effectively guarantees both IP and voice traffic with carrier-class characteristics. Over time, it will be IP exclusively, but we aren't there yet. That's why most operators are investing in a combination of IP and ATM," concludes Torbjörn Nilsson.

Nils Sundström
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Division Internet Applications and Solutions

✣ In the new world of communications, the operator's role will include supplying both network capacity (network provider) and commercial services (service provider).

"Our customer segment is service providers, and our goal is to be their leading supplier," says Haijo Pietersma, Executive Vice President of the Internet Applications and Solutions division, where the overriding goal is also to make mobile Internet a part of everyday life.

The division is developing its business towards three goals:

- It will be the leading system supplier of Service Network Platforms with applications for mobile commerce, mobile infotainment and wireless messaging. The platform allows different combinations of services and applications to work with different types of terminals over an operator's multi-service network. Service providers can thus build and integrate scalable solutions for both wireless and fixed networks.
- The division will also be the leading 3G supplier within system integration and consulting services. Developing a new customer segment for Ericsson with completely new business solutions, demands close collaboration and an intensive dialogue with the new customers. It will be extremely important to have comprehensive knowledge of what is happening in the market to be able to introduce complex technology in new, competitive business offerings.
- The new division also aims to take a leading role in stimulating the development of new companies in the area of Internet applications.

"Going forward, third-party application developers will be a strong driving force in the development of the mobile Internet," says Haijo Pietersma. "We have developed a new research and development program with a strong focus on the Service Network Platform. The organization has been strengthened by adding units with expertise and products in such areas as intelligent networks and prepaid solutions, which are important components in a service network offering.

"We are building up regional units and other business units in Ericsson companies in local markets," continues Haijo Pietersma. "In addition to product and sales support, these units will develop and integrate customer solutions based on our Service Network Platform and key applications. Through the Ericsson Developer Zone program, we are building and supporting one of the world's largest networks for third-party developers of Internet applications.

"The keys to success will be remaining focused and working quickly, while ensuring that our solutions support the Mobile Systems division in winning 2.5G and 3G contracts. Collaboration with the Consumer Products division is also increasingly important in being able to link applications with terminals and networks, thus allowing us to offer total end-to-end solutions," concludes Haijo Pietersma.

ESP – a process with strong roots

Ericsson's Strategic Planning (ESP) is a process with strong roots in the organization. An overall strategic plan is developed for the company as a whole, as well as local ESPs for every business and market unit.

Photo: Ken Tannenbaum/The Image Bank

❖ The ESP that is presented at the end of August each year can be seen as a frozen image of a process continuously in progress.

The input to the process comes in part from the internal organization and in part from an analysis of the industry provided by the Business Intelligence unit.

The process begins in December when the core unit for Strategic Planning collects material about market trends from both the Internal Marketing units and the Business Intelligence unit.

Overall objectives

The market is scanned using growth forecasts for both products and the market in general.

The material is compiled and presented at a meeting with Ericsson's Executive Management team, which establishes the overall objectives for the coming three years. At the end of January, these objectives are communicated to the organization in the form of directives to the business and marketing units.

These units then have until April to integrate the directives in their own operations and to develop strategies for achieving the objectives. The individual units are given considerable freedom in finding methods that suit their operations and which facilitate the implementation and the attainment of short-term goals.

Each business unit works with its production units to create a complete ESP. Ericsson's marketing units do the same. The business and marketing units work together and share knowledge about what products will be available and what the market expects.

Corporate ESP developed

Toward the end of April, the business and marketing units submit their ESPs to management for their respective divisions or market regions.

These managers than compile and synthesize the material. At the end of May, reports are submitted to corporate management describing threats and opportunities, goals and strategies, and financial considerations.

During the summer, corporate management then works with this material to develop a corporate ESP that is presented to the Board of Directors in August.

"The process perhaps takes too long today," admits Inger Högberg, who heads Ericsson's unit for strategic planning.

Inger Högberg

"We are looking at ways to speed it up, while ensuring that it remains rooted in the organization. We are also studying ways to more strongly link the ESP to business processes in setting short-term goals."

Lars Cederquist
lars.cederquist@lme.ericsson.se

Balance creates freedom

❖ "Ericsson's ESP process maintains a good balance between senior management and the various business units and provides considerable freedom for the units to develop the goals and strategies that their business demands," says Patrik Regårdh, who was previously responsible for the ESP at the business unit for GSM and WCDMA.

Patrik Regårdh

"For us, ESP work meant taking the input data from corporate management, as well as market trends and subscriber data, and creating a synthesis of what we considered important. The syntheses were based on supplementary business intelligence regarding development for our most important customers and joint strategic work with product and certain marketing units," he says.

"The result was a mix of top-down from management and bottom-up from the organization. We also employed a few new methods for communicating the strategy plan, including a website that was well frequented," he continues .

ESP work, however, could be better timed for those working in the line organization, Patrik Regårdh says:

"For us, the ideal would be to have a new ESP in September that we could immediately begin breaking down into actions as a part of the process for formulating the goals for coming years.

Lars Cederquist

Clear directives most important task

❖ "Trying to communicate directives to the organization is always a challenge," says Mark Wilson, who is responsible for sales and support solutions at Ericsson's US company in Richardson, Texas.

Mark Wilson

"One problem is that most directives need to be substantially modified to allow them to be introduced in the receiving organization. That demands commitment on the part of people who often have other things to do. Another problem is that many directives are so loosely formulated that they are open to interpretation. The difficulty in communicating corporate directives thus lies in making them clear and measurable, while strengthening responsibility for ensuring that they are implemented.

"The ESP process has a good balance between top-down directives and bottom-up strategies," continues Mark Wilson. "One example is management's directive that the entire organization should focus on mobile Internet. If you look at market trends, it is obvious that the directive is completely in line with what we hear from the market (bottom-up) and demands from management (top-down).

"Another aspect of the strategic planning process is that it plays an important role as a communicative tool. In the US, we use the ESP not only as a strategic tool, but also as the basis for communicating marketing strategies and directives to employees.

"Perhaps the most important function of the ESP lies in how we can use it to create stronger strategic links with our customers. If we involve our customers in strategic planning, we will immediately get a better idea of how they are thinking. We can then ensure that our strategic focus is in line with theirs," concludes Mark Wilson

Lars Cederquist

Division Multi-service Networks

❖ "We are focused on realizing Ericsson's vision for the mobile Internet," says Einar Lindquist, manager of the Multi-service Networks division. "In being able to offer end-users a mobile Internet, our role is to offer multi-service networks for high-speed Internet.

"The primary goal is to be the leading supplier of solutions for multi-service networks," continues Einar Lindquist. "A sub-goal is to be the dominant supplier for operators going from narrowband to broadband and to be the leader with respect to solutions for broadband access. At the same time, we must maintain our market shares in traditional circuit-switched networks. Overall, we must grow faster than the market!

"Our concrete goals include refining our successful Engine concept and investing the returns from today's business in mobile Internet. We will develop our solutions in close cooperation with both internal and external partners. We will also strengthen relations with strategic customers and let them influence our solutions portfolio.

"We have identified a number of critical factors. These include working closely with other divisions, providing clear information in our marketing messages on how our solutions fit into Ericsson's total offering and optimally exploiting Ericsson's leading position and the synergies between wireline and wireless networks and the Internet," he concludes.

Innovative ideas live on

Photo: Tommy Pederssen/ Pressens Bild

Neither inside nor outside Ericsson, but on the outskirts of the company. That is where you will find Ericsson Business Innovation. With its feelers reaching toward the future, this company launches operations that are currently outside Ericsson's core areas, but that may well become core operations in the future.

❖ When Contact visited Jöran Hoff, President of Ericsson Business Innovation, rows of business cards were tidily arranged on his desk.

"I've just arrived back from Israel, where I gave a talk about our operations that was very well received, just as with the other places I have visited. There are many companies out there that consider us an attractive partner and would like to cooperate with us," he says.

Jöran Hoff

The company Ericsson Business Innovation was formed on October 1 this year, but its operations existed previously as a business unit within the former operator segment.

Hiring soon

Today, the company has about a hundred employees. The workforce could probably be increased by about another hundred, but no more, since the small-scale character would then disappear and there would be too much bureaucracy.

Many Ericsson units support innovative thinking, but Ericsson Business Innovation catches the ideas that do not fit in anywhere else and would otherwise fall by the wayside.

Ideas can come from within and without, though most are generated internally. During the summer alone, we received some 90 ideas.

The basic requirement for considering a suggestion is that it is based on new technology or new business models.

The ideas are analyzed and the ones found interesting are then tested in a so-called innovation cell for about four months, while the participants develop a business plan.

Young and experienced

If the business plan is viable, the project proceeds and a "venture" is formed.

The venture is operated as a separate company with a board of directors, and 12 to 18 months are spent developing prototypes or products for one or more customers.

If the result is a product that fits some area of Ericsson's core operations, it is then transferred to that unit. If not, it is sold.

All ventures operate on commercial terms and, despite their small size, have the same area of responsibility as a business unit.

The company's role is not solely to develop and test new products; it also includes new business models. For employees with creative ideas who want to try working in a small startup, Ericsson Business Innovation could be a workable solution.

Attracts enterprising types

One aim is to blend experienced employees with younger employees. Interaction with people who have experience of running a business is particularly useful.

Although Sweden currently has a large number of players looking for new business ideas, Ericsson is definitely one of the most attractive companies for innovators to work with.

"Innovation hubs" have been created at five centers throughout the world: Stockholm, San Diego, Helsinki, Raleigh in North Carolina and Melbourne. In these hubs, employees from various Ericsson divisions can take care of suitable ideas.

Apart from the several projects in progress, Ericsson Business Innovation has also passed on a number of projects.

As early as three years back, the company was working on wireless Internet, and created WAP. Another idea in the market is GSM Pro, which provides private-radio functionality over the GSM network.

Seeking out blind spots

"We look at trends and try to understand how end-users think and what we believe they will need in five years. We look for white patches, and we have now identified white patches in three areas," says Jöran Hoff. He lists them as follows:

"Residential Communications Services, that is, home communications; Automotive Communications Services, which stands for in-car communications; and Content Aggregation. The latter of these involves creating new content services by supporting new players that are developing applications for fixed and mobile Internet."

Ericsson Business Innovation cooperates with and has interests in a large number of companies, including Wireless Car, Connect Things and Mediatude. Further interesting joint projects are in the pipeline.

"Our operations are not all that strictly planned – here, intuition is a more relevant term," Jöran Hoff explains. "We don't like or understand all the ideas we receive, but that's of secondary importance. The ability to test the ideas is what counts."

Jöran Hoff has been in the business for several years and remembers when mobile telephony was a new area that encountered considerable skepticism in certain areas of the Company.

People who have been working with mobile telephony for a long time understand what Jöran Hoff means when he talks about the ERA spirit, the corporate culture at Ericsson Radio Systems that has characterized mobile-telephony operations to a great extent.

It is largely a matter of creativity and delegation – two key concepts at Ericsson Business Innovation.

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Division Consumer Products

❖ Ericsson is one of the two best-known brand names in the mobile industry. By 2005, the company aims to secure a position as one of the two best-selling mobile-phone manufacturers.

The Division's strategy for meeting the competition and satisfying customer preferences has two directions – firstly, manufacturing large volume of phones in the lower-price segment and, secondly, being a world leader in mobile Internet.

To achieve this, manufacturing of lower-price phones will be transferred to countries with lower manufacturing costs.

In the future, research and development, and testing of lower-price telephones will also be carried out at various locations in Europe.

The strategy of outsourcing manufacturing will continue.

In the future, Ericsson will also engage companies that produce finished products. In order to guarantee design and quality, they will have to follow Ericsson instructions.

Even though the Division has encountered most difficulties in the lower price segment, this segment will continue to be an important part of the operations in the future.

"We want to be the main player, but not only in the top segment – in the lower segment as well. That's where the really large volumes are," says Jan Wäreby, executive Vice President of the Consumer Products Division.

Operators demand telephones adapted to the services that give them most income – SMS, for example. The new Ericsson phones in the lower-price segment are equipped with WAP chat. WAP chat enables users to communicate with several people at once by means of text messaging.

Development and manufacturing of the new product generation will be localized in countries that are now losing traditional production activities.

Jan Wäreby emphasizes that Ericsson cannot afford to be late when demand for UMTS products begins to take off.

Division Global Service

❖ Operators must perceive Ericsson as a highly competent partner that delivers turnkey solutions, in which service is the feature that holds together all of the components.

Competence is a key word in the Global Service Division's strategy, according to the division's Executive Vice President, Bert Nordberg.

The overall goal is to be the largest in service provider in the telecom industry.

"To achieve this goal, we must create the industry's most efficient rolling out procedure – that is, installing and commissioning large systems," he says. "Customers are purchasing increasingly large and complex systems, while delivery times are becoming ever shorter. Extremely efficient procedures are required to cope with these demands."

A key point in the Division's strategy is to be the customer's natural choice of partner for integrating different systems, and this applies to both fixed and the mobile systems. Bert Nordberg stresses that the different market units share a key task here.

Another key task involves developing the global product portfolio – scheduled to be presented this autumn.

"We have customers throughout the world, so it's important to be perceived in the same way in whatever country we are operating in," Bert Nordberg explains. Different countries' service requirements change, making it necessary to be able to move resources between markets.

With respect to system roll-out, as many as 60,000 people will be working with this in 2003.

Today, 50 percent of this work is carried out by subcontractors. The aim is to increase this proportion to 75 percent. Contracts were recently signed with NCC and Skanska.

Telecom Management, the fourth key area for this division's strategy, includes billing services, such as payment systems and security systems.

Managed Service, which involves operators outsourcing the operation of their networks to Ericsson, is the fastest-growing area of Telecom Management. To date, twelve operators, in both wireline and wireless systems, have chosen this route.

Photo:
David De Lossy/
The Image Bank

Network with broad reach

Communicating Ericsson's strategy and getting coworkers to feel as though they are involved is not an easy task. At the business unit formerly known as GSM Systems, they utilized a website that included journalistic articles, eye-catching headlines and a network of communicators to aid in the endeavor.

❖ As soon as work began on the business unit's strategy, project manager Patrik Regårdh brought in internal communications.

"The strategic work was divided up into several areas, each with a team leader. A communicator from the project group was present at every meeting," says Karin Ronander, head of internal communications at the business unit.

"A prerequisite for achieving success in communications is to be involved in the work right from the start. Since we were, we also gained good insight into the strategy," she explains.

Outreach website

The network of communicators that exists within a division, also plays an important role in the success of communicating strategies. The division's network is overseen by Carin Gessler, who organized the seminar on strategic communications.

Benchmarking with other business units and with the Consumer Products Division has also provided useful skills. Within that division, a serious effort has been made to work on long-term strategic communications.

"We decided to focus our efforts on the business unit's website in order to reach a wide audience within GSM Systems," says Anna Frölund, project manager for ESP communications.

Four basic themes

The departure point for this work were four primary challenges that the business unit and division had identified: Mobile Internet, evolution to 3G, globalization and mega-networks.

"The website was formed around these challenges. In order to make users feel as though it affects them, we decided to use expressions that reflect the company's values on a more personal level, such as passion, change, freedom and mobility," says Karin Ronander.

When you click on the quotes/headers, you pull up an article which, using a journalistic method of attack, enlivens the traditional strategic documents.

Texts are not only limited to GSM and the business unit's products and markets. There are also articles that provide worldview analyses and put operations into a larger context.

"Since the strategy was ready and being communicated through our website prior to the major reorganization last August, it helped to gain a broader understanding of the need for a new organization," says Karin Ronander.

"In order to attract employees to enter the business unit's website and read articles, we created tabloid-style headline pages to engage people and demonstrate that strategies are something that affect us all," says Anna Frölund.

Headlines on these tabloid pages read, "How to increase your fortune," "How to avoid the competence trap," and "Creating jobs of the future."

The network of communicators within GSM Systems met and tossed ideas around about how they would spread their strategic message within the organization. Their own websites, which use special ESP banners and links to strategy articles, have been important. Everyone connected to the network also had the opportunity to review material that would be available on the strategy site.

"In order to succeed at communicating strategy, it is important to be involved with the strategic work right from the start," says Karin Ronander and Anna Frölund. Photo: Lars Åström

At the beginning of the summer, all of the managers received a letter and a CD with material about strategy from Bo Bergström, head of the business unit, with a challenge to communicate strategies within respective units.

That strategy is a long-term platform for achieving the goals of the operation.

"Out among the various units, work continues on setting goals. An important task for internal communicators, within respective units, is to communicate and have a dialog about goals and strategies. Even now, the communicator network is important since it provides members with an opportunity to plan activities together," says Karin Ronander.

Cellular Express is the internal newsletter for the business unit. In October, it came out with a special issue on strategy.

Summer job

The biggest portion of the work to tailor communications strategy occurred during a three-week period at the start of the summer. Karin Ronander and Anna Frölund think that the work has been both interesting and fun.

"Now it's up to the individual managers to ensure that strategy and targets are adapted to their own operations, reaching all employees. Websites and newspaper articles aside, employees prefer to receive important information through their immediate supervisor. Despite everything, it is through dialog between individuals that one can gain a real understanding of the goals and strategies, according to every study," they say.

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Four voices on strategies

There is always a risk that strategies will simply be interpreted as empty words and rhetoric.

Contact has taken the pulse of a few sales representatives in order to find out if and how they use strategic documents in their daily work.


Klaus Rohn


Kaj Snellman


Raymond Poon


Alan Ho

✤ Klaus Rohn is a sales representative for Germany's largest operator, Deutsche Telekom and its subsidiary, T-Mobil.

In his opinion, Ericsson's strategies need to be updated more frequently than they are today if they are to remain timely.

Nevertheless, he frequently uses the ESP (Ericsson Strategy Plan), document in his work – partially as a reference book. Examples include when he wants to find out more about the market situation in a particular country.

He also makes frequent use of the department that calculates how much Ericsson anticipates selling in various markets.

Raymond Poon, sales representative for the Hong Kong based operator, SmarTone, agrees with Klaus Rohn.

"The portion that deals with how the market is anticipated to develop is a good source when discussing trends and future services with our customer," he says.

Kaj Snellman is a sales representative for Vodafone. He agrees that the ESP document could be improved and thinks that the company should emphasize the importance of "Time To Service," as he calls it. Such a calculation would track the amount of time it takes for goods to leave the plant until a system is completely built and services operational. In his opinion, Time To Market is not good enough.

"We have to be better at thinking things through all the way out to the customer. Everything isn't ready to go just because we've delivered a system. The customer is satisfied only when the service is up and running and money starts flowing in," says Kaj Snellman.

In order for Ericsson's collaboration with various operators to work in an optimal manner, it is important that customers and the company interpret the market in roughly the same manner.

Do Ericsson's strategies sometimes collide with those of its customers?

"Deutsche Telekom believes that we somewhat exaggerate our estimates for potential market growth, for example mobile phone penetration rates. Otherwise, we interpret the market in almost the same manner when it comes to the development of both fixed and mobile networks," says Klaus Rohn.

Both Alan Ho, sales representative for SingTel, and Raymond Poon believe that Ericsson's strategies are in agreement with those of their customers in many respects.

"SmarTone is very technically oriented and is planning to be the first to launch many services of the future. They were, for example, among the first to launch GPRS services. Ericsson supported them in that effort," says Raymond Poon.

One of Ericsson's goals is to be viewed as the best and most innovative telecom supplier.

All of the sales representatives are in agreement that the company is considered to be the leader in mobile Internet.

"We're definitely considered to be a leader in mobile Internet and third-generation mobile phone systems. One area where we could improve is getting our products out as quickly as possible, otherwise known as Time To Market," says Klaus Rohn.

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Photo: Magnus Hallgren/Pressens Bild

Division Mobile Systems

✤ "With 3G licenses now in hand, the struggle among competitors in the marketplace is increasing. Our strategy is to be the leading supplier of equipment for second and third-generation systems. In order to handle that challenging assignment, we require not only outstanding products, but also skilled workers," says Mats Dahlin, Executive Vice President of the Mobile Systems division.

Mobile Internet, the evolution to 3G, globalization and mega-networks – these are the defining issues of the market today, and they are also at the foundation of the division's strategic and long-term goals. Globalization will mean a consolidation within the telecom industry, with many operators merging into various constellations around the world. Mega-networks will mean that it will become increasingly commonplace to build very large networks.

"We plan on being the leading supplier to mobile and service operators, with a total market share of over 30 percent. This is one of our most important long-term goals," emphasizes Mats Dahlin.

The company's strategy is to be the leading supplier of equipment for 2G systems (GSM, TDMA, CDMA and PDC) and 3G systems (Edge, WCDMA and cdma2000), as well as the rollout leader – i.e. installing and putting into operation networks according to customers' needs. At the same time, it is important to be a world leader when it comes to developing new products and solutions.

Mats Dahlin also emphasizes how important it is to secure an efficient delivery system and to use and further develop processes available for Time To Market (TTM) and Time To Customer (TTC).

Introducing e-business is another current challenge.

Yet another important part of the company's strategy deals with employees and aims both at retaining key people and developing employees' own expertise. Everyone should have personal goals, development plans and development discussions with their manager.

"Talented employees are the foundation of Mobile Systems' strategy to retain its leading position in an increasingly tough market," concludes Mats Dahlin.

Data Backbone and Optical Networks

✤ On July 1, the Data Networks and IP Services (DNIP) business unit and the Optical Networking group merged to form a totally new Ericsson division – Data Backbone and Optical Networks (DBO), headed by Mike Thurk and administratively headquartered in Boston, Massachusetts.

This merger of datacom and optical networks confirms that the infrastructure and solutions for the converged datacom and telecom backbone networks of the future are an important part of Ericsson's game plan.

DBO will use its datacom and optical expertise to develop and provide the backbone systems for the multiservice networks, vital to both wireless and wirelines customers in the years ahead. While continuing to sell discrete data and optical products, the main emphasis for DBO will be these backbone systems, which are crucial features of Ericsson's leadership within mobile Internet and multiservice networks. DBO hopes to be in a position where it will dominate the market for multiservice backbone networks. These systems will integrate data and voice into a single network for several types of access.

DBO's large potential customer base includes major telecom operators that want to offer datacom services and multimedia to their customers. It also includes data giants that want to integrate voice into their networks and the large number of next-generation service providers emerging in many countries to compete against the older telecom providers. In dealing with these customers, DBO uses Ericsson's strength and reputation as leverage to move the customer to a new level of service, which is based neither on traditional telephony nor on traditional datacom.

To realize the mission of dominating this new market, the division's strategy is simple – attract major mobile telecom operators, operators of fixed telephony and new Internet Service Providers (ISPs) in key markets. Customer focus is paramount and a strong sales force is being established throughout the world. It is also critical for DBO to cooperate closely with other divisions, whose product offerings will incorporate DBO's products, such as GPRS, the WCDMA and Edge 3G networks, as well as the ENGINE multiservice network.

Telling "the Ericsson Story" to the world

The Ericsson Story is an important new strategic tool for Ericsson's external and internal communications. This is a condensed description of what Ericsson has to offer, the company's strengths and its "soul." The Ericsson Story has been formulated within Corporate Communications with the help of "historians" from many parts of the company.

1. The grand idea

❖ In the late 1800s, Lars Magnus Ericsson, the company's founder, was competing for a contract to expand the telephone network in Stockholm. In the contract negotiations, he emphasized his belief that the telephone addressed a basic human requirement and that it should be made available to all. His competitors, on the other hand, argued that the telephone was primarily intended for those who could afford such luxury. Ericsson won the contract.

We still believe in this grand idea – that communications is a basic human need. This is why Ericsson for nearly 125 years has helped to make telecommunications available to hundreds of millions of people around the world.

This grand idea is also why Ericsson has always promoted standards and open systems and why it is the only company in the world able to offer solutions for all mobile standards. We believe that it's about communication between people. The rest is technology.

2. Our vision

❖ Ericsson's vision for the future emphasizes three factors as particularly important for the development of data and telecommunications:

- Personal services
- Mobile Internet
- Always connected

All the telephones and computers connected to the Internet together create the largest machine ever built by mankind. This network makes it possible for billions of people around the world to communicate.

Ericsson is one of the largest and most successful companies in the industry that has created this capability.

Most of the activities of our daily lives demand communications. Imagine how life would be without mobile telephones, e-mail or the Internet. And remember how fast technology is developing. Who had heard about mobile phones 20 years ago or knew what the Internet was a decade ago?

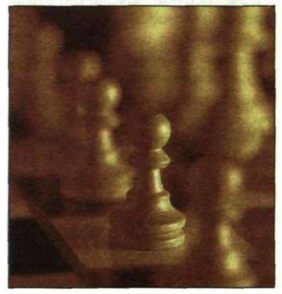
On the one hand, mobile communications has become the world's fastest growing technology. In just a few years, more people will use mobile phones than the fixed network. Particularly for young people, the telephone is now a life-style product and a part of their personal profile.

The Internet, on the other hand, has revolutionized the use of computers in that everyone can now connect to the global network. Today, sending an e-mail or web surfing is as commonplace as watching TV. In business, the Internet has created entirely new companies and completely new ways of working.

Mobile communications and the Internet are now converging to create the mobile Internet. Put simply, mobile phones will begin to look more and more like small computers. They will also have built-in cameras and music players.

With these devices, people will be able to e-mail, surf the Web, read the news, pay bills, play games and much, much more. This is the mobile Internet, which is much more than just wireless access to the Internet. It will be always available and easy to use. With a single key press, users will be able to access personal services that adapt to where they are located and the time of day.

This new technology will transform and enrich the ways in which we interact with the people around us, both privately and in our work. The mobile Internet will provide increased freedom and flexibility to divide our time between work and relaxation. It will change how we maintain contact with family and friends, do business, manage our personal finances and entertain ourselves. And it will all be possible without the need for tangled cords, thanks to such technologies as Bluetooth.



Mobile Internet is the next big trend in communications. All over the world, thousands of companies are preparing for the new mobile Internet age.

They are building networks, designing phones and developing services. Just as Ericsson has been a pioneer in mobile telephony, the company is now leading the rapid deployment of the Mobile Internet.

Mobile Internet is a reality to day. Its capabilities will gradually increase.

WAP was the first step, which made it possible to connect to the Internet from a mobile phone.

Soon other technologies will be available that will allow us to be always connected. GPRS and the US equivalent CDPD are examples of technologies that will make WAP even more powerful and easier to use.

With 3G, third-generation mobile telephony, we will take the next step. With bandwidth up to 100 times greater than today, users will have access to advanced multimedia services via their mobile phones.

It is no exaggeration to state that 3G will mean a new era in communications. We are facing a technology shift every bit as great as when mobile telephones were introduced 20 years ago.

While the mobile Internet is growing at a breakneck speed, fundamental changes are also taking place in the fixed network. Making personal services available to users at work, at home and on the move requires a new type of telecom network, a multi-service network. Operators are therefore modifying their networks so that they can handle telephone calls, Internet traffic and video in a single network with a powerful data backbone based on optic technology.

Ericsson continues to lead development in the telecommunications industry based on the same grand idea as for over 100 years ago that communication is a basic human need for all people.

3. Our strategy

❖ Ericsson's strategy, which is described in greater detail elsewhere in this supplement, focuses on three areas: mobility, the Internet and the intersection of these two areas: the mobile Internet.

Ericsson has long been the undisputed leader in mobile telephony. Now, as the mobile Internet emerges, we have taken the lead in this area, as well.

Ericsson provides everything needed to build the mobile Internet: systems, terminals, applications and services. We believe that it is important to possess expertise over the entire chain and that our unique ability to supply total solutions is a guarantee for the customers that they will work all the way down the chain.

4. Our strengths

❖ Why do business with Ericsson? Because the company offers:

- Leading innovations

Ericsson has always been a very innovative company. We led the shift in technology from analog to digital cellular telephony. Now we are leading the way in third-generation mobile communications. This is made possible through Ericsson's unprecedented investments in research and development. No other company in the industry invests as much in technical development. Ericsson lives according to the motto that our engineers should follow the process all the way from the research labs to the customer, thus sharing their expertise in the process.

- Global presence

Ericsson is everywhere. Over more than 100 years, the company has built a global network in more than 140 countries. This makes us one of the most global suppliers in the industry, with a unique understanding of different cultures and different technologies.

- Customer relations

Ericsson is built on long-term relations with its customers. Together with our customers, we have experienced several different shifts in technology. Through these transitions, we have gained unique insight into how we can continue to support their business. The world's ten largest mobile operators are all Ericsson customers. More calls are placed in systems supplied by Ericsson than any other system in the world.

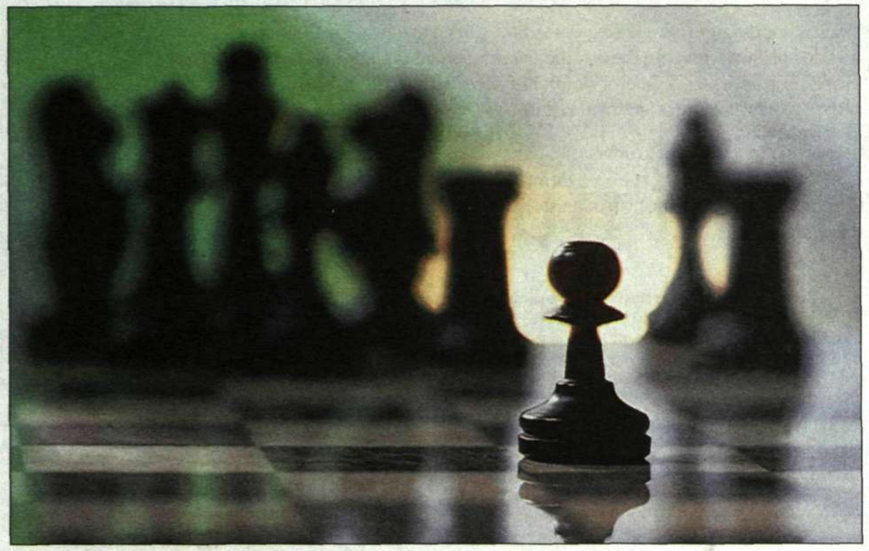


Photo: John Banagan, D Redfearn, Ken Tannenbaum, Antonio Rosario/The Image Bank

5. Our way of working

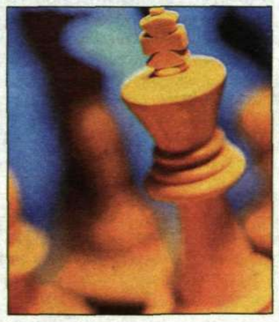
❖ Why is Ericsson a unique company to work for?

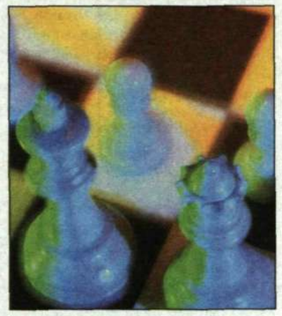
- We are at the forefront of technology.

Our innovative ability is the foundation for Ericsson's success and the key to our future. Working for Ericsson means working on the leading edge of communications technology. This makes Ericsson a unique workplace. Investments in research and development over many decades have made our company a world-class breeding ground for entrepreneurs. Throughout the company, we nurture a climate of innovation that to a great degree is based on personal freedom.

- We work globally.

Working for Ericsson means being part of a global team. With activities in more than 140 countries, Ericsson is the world's largest international employer. The company can offer virtually unlimited opportunities for international employment. Ericsson also has a tradition of developing its own managers by offering them fantastic opportunities for personal development.





- We have created a fantastic knowledge-based network.

First, best and cost-effective. These are the guiding principles in how Ericsson works and its support for customers. Together, Ericsson's 100,000 employees constitute a flexible, knowledge-based network that is the key to our continued success at the forefront of mobile Internet technology.

6. Our business divisions

❖ What does Ericsson offer customers in practical terms?

- Mobile Systems Division

Mobility is the industry's strongest driving force. We are the undisputed leaders in this area. Within mobile systems, Ericsson is twice as large as its nearest competitor.

- Multi-service Networks Division

The Internet is forcing an expansion of telecom networks. Ericsson is helping its customers to transform today's networks into tomorrow's multi-service networks. With Engine, Ericsson has taken more than a 40-percent market share for such networks in fierce competition with leading datacom suppliers.

- Consumer Products Division

The mobile telephone is already the most common electronic product in the consumer market. In a few years, the mobile phone will overtake the PC as the most common tools for accessing the Internet. Ericsson is one of the world's three largest suppliers of mobile phones.

- Data Backbone and Optical Networks Division

The rapid growth of the Internet also demands more powerful data and optical networks. Ericsson has solutions for tomorrow's IP-based networks and comprehensive expertise in systems, applications, services and terminals for these networks.

- Internet Applications and Solutions Division

With its unique expertise in positioning, secure transactions and messaging services, Ericsson is an important driving force with respect to applications for the mobile Internet. We also offer a platform called the Service Network for cost-efficient operation of such applications.

- Global Service Division

Ericsson offers its customers assistance in building, operating and optimizing their networks. We provide consulting services, competence development and system integration. We are the world's largest supplier of services for telecom operators.

- Other business areas

Ericsson is also active in such growth areas as electronic components, telecom cables, business communications and defense electronics.

7. Ericsson as an investment

❖ There are several reasons for investing in Ericsson. There are some of the most important at the present time.

- Ericsson is focusing its business on the mobile Internet, a market that is growing extremely rapidly. In two years, more people will use mobile phones than fixed phones, and the year after that, the mobile Internet is expected to be greater than the fixed Internet.
- Our company is extremely well positioned to take advantage of this growth, since we are the leading player in mobile communications. More than 80 percent of Ericsson's sales derive from mobile communications in some form or another. Ericsson is already the market's dominant supplier in two of the areas currently most important for the mobile Internet: GPRS and 3G, where Ericsson is once again the world leader.
- Ericsson's financial targets are very clear and ambitious. For 2000, Ericsson expects growth in net sales of about 25 percent. The operating margin is expected to be between 6 and 7 percent.

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Yes, it is important to have strategies – to have direction and goals. But strategies do not always play out the way they were intended to. They may be inappropriate at a particular time, or simply ill-conceived. We asked three people who have held leading positions at Ericsson to tell us about their experiences.

Gold nuggets and flops

Björn Svedberg has been on the Ericsson board for 21 years and he has worked with the Company for a total of 36 years. Until 1997, he was the Chief Executive Officer of SEB. Today, he is on the boards of Saab, Investor, Spray and Gambro.

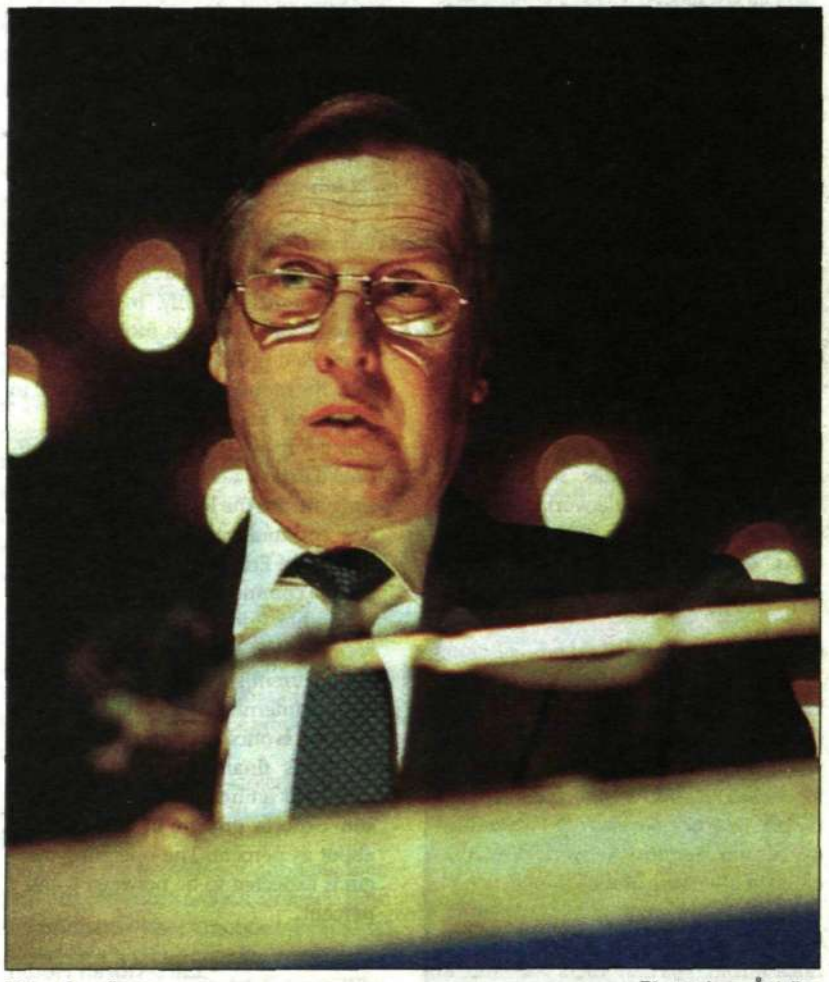
Which of your strategies are you most pleased with?
"At the beginning of the 1970s, I was chief engineer at Ericsson and supervisor of a group. Not everyone agreed that we should focus on the AXE system, but I was convinced of its merits, and it turned out to be very successful.

"I am also pleased that during my time as President we carried out a broad-based European expansion – particularly in France and Italy."

Which of your strategies are you least pleased with?
"In the early 1980s, Ericsson focused on developing PC computers in the Information Systems division. As the market changed and standardization was introduced, however, these operations became unprofitable. We found ourselves competing with the giants of computer technology, so we quickly decided to change course and sold the operations to Nokia."

Any memorable anecdote?
"Yes, after we had sold Information Systems, I called my boss at the time and told him that 'it was a useful lesson in the art of management at least.' He muttered something about how I better not repeat the lesson."

What is the important thing about strategies?
"It is important to be in agreement about a goal and to know where you're headed. When the market changes, sometimes the Company must change it course, too, but it is important not to make any overly hasty decisions. To work, any strategy must be understood and accepted by all employees. Communication is the bottom line."



Björn Svedberg

Photo: Lars Åström

Carl Wilhelm Ros is what you might call a professional board member. He is a member of several boards, including SEB, NCC, Assi Domän and LKAB. He is Chairman of the Board of Framfab. At Ericsson, he preceded Sten Fornell as Chief Financial Officer.

Which of your strategies are you most pleased with?
"I'd rather not name any specific strategy. But generally, I can say that of course you've got to have a strategy, but the most important thing is to have skillful managers who can inspire their staff to work toward common goals. The key thing is to focus on the individuals who are supposed to carry out the changes."

Which of your strategies are you least pleased with?
"Adopting overly complex and sophisticated administrative control systems. Such as the support system for AXE. Systems should not be so sophisticated that noone can understand them."

Any humorous anecdotes about strategies that did not succeed or that maybe paid off earlier than expected?
"The story of our adventure with the paperless office at the beginning of the 1980's is a classic. The goals was to make paper scarce by the end of the Eighties – but that goal still seems pretty distant."

Are strategies important? Why?
"It is important not to be bound to a strategy. You should always have alternative solutions, particularly in a rapidly changing technological and telecommunications environment.

"For this reason, in my time we focused on 'scenario development.' We developed various future scenarios that matched what we and others expected would happen in technology and the telecommunications industry."

Jan Stenberg was President of Ericsson Telecom from 1988 to 1994. He is currently the President of SAS.

Which of your strategies are you most pleased with?
"The best strategies were probably in marketing. For example, year after year we struggled, from a weaker position, against nationalistic forces in Brazil, Mexico, Spain and France, and came out the winners, with successful subsidiaries in new expansive telecom markets."

Any less successful strategies?
"My strategy of shutting down the Company's business-luncheon restaurant – at Midsommarkransen, Stockholm. Brilliant idea, but impossible to realize as it was extremely impopular.

Any amusing episode you would like to share with us?
"Björn Svedberg and I were going to buy out the local majority owner in a company that was cooperating with us. We were about to negotiate a price and were well prepared, with our 'final offer' hidden up our sleeve. Along comes their negotiator, a really arrogant type, and without showing any interest in our position put his bid on the table. But he had miscalculated: his price was only half our final offer.

"We looked at each other and protested a little, but he assured us he wasn't prepared to budge. Skillful negotiators that we were, we let him have his price. The moral of the story is: be well-prepared, agree on your tactics, don't go into it alone, and take your time."

Why is it important to have strategies?
"Goals without underlying strategies and plans are meaningless. Sometimes, tactics are sufficient. The road that leads to a goal is often long and winding."

Ulrika Nybäck

The Collection

ERICSSON

We give nice presents to the people we really care about, and it's for this precise reason that we've come up with this collection, which is completely unique to Ericsson. We've gathered a number of suggestions of items you can give to people you like or would like to get closer to. Human contact is crucial to us, and forms the basis of our entire business concept.

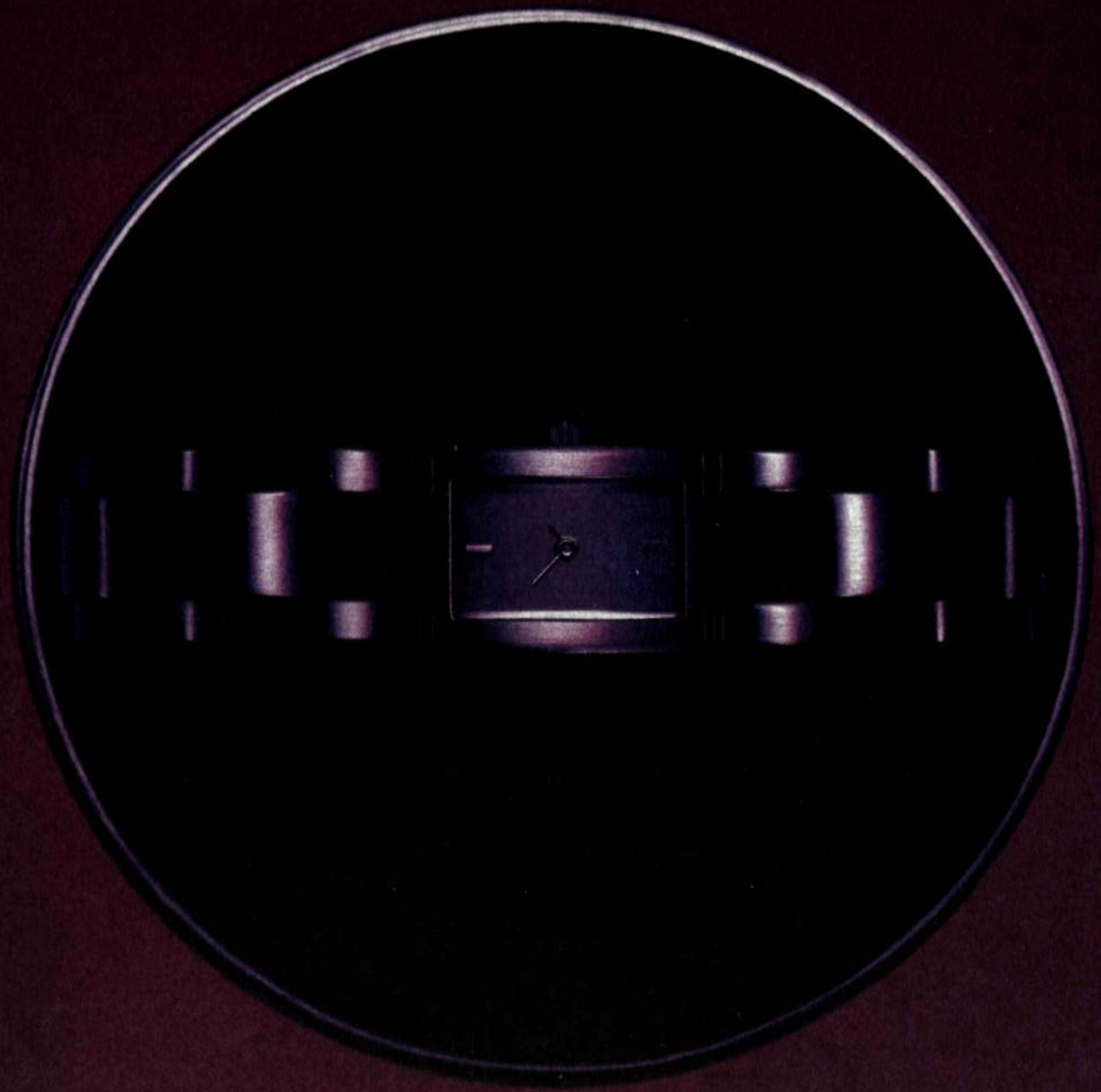
All products have been handpicked to represent Ericsson, from leather travel wallets to wristwatches and business card holders. In their own way, they all symbolise the values that Ericsson represents.

The entire collection is available on Ericsson's Intranet, where you can also find more details (size, colours, prices, etc.) about each product. You will also find more information about how to order and delivery times.

Welcome to our online store.

Kjell-Åke Rydén
Manager, Brand Promotion Products

Left page: Ladies' wallet, Travel wallet and Organizer, nylon with leather details. *This page:* Bottle opener, metal.



Left page: Ladies' wristwatch, silverplated brass, gunmetal face. *This page:* Cabin trolley, nylon with leather details.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1. *Fleece sweater,* three different colours 2. *Keyring,* metal, white/blue light 3. *Organizer,* nylon with leather details 4. *Pencil/Pen,* roller ball 5. *Jacket*, rubberized, man/woman, three in one 6. *Yo-Yo,* wood 7. *Ladies' top,* three different colours 8. *Breath mints* 9. *Bike bag,* two phone pockets 10. *Wristwatch,* man: stainless steel, white/black face, woman: silverplated brass, gunmetal face 11. *Chocolates,* in shape of R310 phones 12. *Logoband with metal carbin hook,* six different colours 13. *Portfolio,* nylon with leather details 14. *Mousepad,* four different motives 15. *Golfsuit,* nylon jacket and pants.

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16. *Toiletry,* nylon with leather details 17. *Polo shirt,* cotton jersey, four different colours 18. *Travel wallet,* nylon with leather details 19. *Sweatshirt with zip collar,* three different colours 20. *Sunglasses,* Polaroid® lenses 21. *Bath towel,* two different colours 22. *Cap* 23. *Bath robe,* white with black embroidery 24. *Mug,* ceramic, grey and offwhite, four in a tube 25. *T-shirt,* four different colours 26. *Key ring,* whistle 27. *Golf umbrella,* fiberglass shaft 28. *Business card holder,* metal 29. *Weekend bag,* nylon with leather details 30. *Pen/Pencil* BIC® clic stic, 50 in a box.

To order, visit the Intranet at:
mcom.ericsson.se/bpp

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