Record phone sales

Swedes are buying new mobile phones more often. Last year saw record sales in terms of volume with 2.4 million mobile phones sold – a 40 percent increase over the previous year. 7

Tracking the family

Using smart communication technology in the home, dad can see that mom is at work, the dog is at home and the front door is locked. The FamilyLink project takes advantage of mobile Internet positioning. 21

Largest GPRS network

Ericsson has signed a GPRS contract with China Mobile, which will build the the world's largest GPRS network. Contracts have also been signed with Ukraine and Lebanon. 6

contact

116.00
Ericsson B share, Stockholm 19/1
Last Contact 105.50

■ NO. 1 · JANUARY 25 2001

In this room, measurements are taken to see how well various sounds are picked up by mobile phones. This is one of many tests that Ericsson phones are subjected to in the test laboratory at Research Triangle Park in the US. Michael D. Townsend, a sound engineer at the lab, explains how virtually all sound waves are absorbed by the cone-shaped protrusions lining the walls. Photo: Ecke Küller

Rigorous phone tests

Robot-like machines subject Ericsson phones to rigorous testing – ensuring that they can be dropped on the floor or tossed about in a purse for years to come. One of Ericsson's mobile phone testing labs is located at Research Triangle Park in the US.

The various tests have produced results – today just four percent of mobile phones are returned in the US, compared with 20 percent five years ago. 16–17

Latin America chooses GSM

Now even Latin America has joined the GSM wave. Mexico's Telcel and Argentina's Telecom Personal will become the first operators in the TDMA-dominated countries to offer GSM-based networks – which will eventually be upgraded to GPRS technology to accommodate higher data speeds. A larger selection of phones and services has enticed operators to adopt the GSM standard. 4

Assistance to El Salvador

Ericsson employees are assisting in the reconstruction of El Salvador's mobile phone network following the recent earthquake there. This is the first time that Ericsson Response, the company's new emergency relief program, has been called into action. 4

Buy groceries via the phone

Ericsson is currently conducting several projects in which Bluetooth is being tested as the service infrastructure in the retail and travel industries. Testers using Bluetooth-equipped phones are able to pay for groceries at one location in Stockholm, as well as check the balance on their store charge cards. 5

Finland home to 3G research

Ericsson has some if its most important research and development centers located in northern Finland, where some 700 engineers are developing the latest WCDMA and IP security technologies.

The country with the world's highest mobile phone density is also one of the most advanced when it comes to GSM technology and applications. 10–12

■ CORPORATE

Fair image

The media world has undergone dramatic changes in recent years. Today, the distribution of news is faster and more global.

It is Pia Gideon's task, as vice president of external information at Ericsson, to promote a fair image of the company. 3

■ WORLD WATCH

Telia and Netcom/Tele2 are forming a jointly owned company to construct a 3G network in Sweden. The arrangement will allow Telia to utilize Netcom's license to enter the 3G market. Costs for the 3G network will be split between the two companies. 8

■ AT WORK

Desk jobs combined with insufficient physical activity can result in back problems, which are preventable through simple exercises. A half-hour of exercise three times a week helps keep the back in shape. 23

5.25" MO GIGAlaxy

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5.2 GB

1996
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1993
1.3 GB

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SONY

Pia Gideon – a clear voice in the media storm

These days, media coverage of the telecom industry is much wider than at any time in the past. Intense competition for new stories and a nervous financial market have created increasing turbulence in the media world. Pia Gideon, Ericsson's Vice President of External Communications, tries to create clarity in the midst of confusion by giving a clear picture of what the company is doing.

Pia Gideon is responsible for all aspects of Ericsson's external information – often a turbulent assignment. The company is monitored relentlessly by the media, and her telephone is always ringing. Photo: Eduardo Valenzuela

➤ A colleague bursts into Pia Gideon's office to say that an Ericsson employee has been misquoted by a business publication which is claiming that Ericsson's mobile phone operations may be up for grabs. "Back in five minutes," she says, as she hurries out to deny the story before more damage is done. Pia Gideon is responsible for external information.

"The tight deadlines and the competitive atmosphere that many journalists face today make it increasingly difficult for them to check their sources properly. Sometimes they publish pure rumors," she says when she returns to her room. She does not appear to be particularly unnerved by the situation.

"It is difficult to deny rumors, and rather pointless," she says. "The original publication may print a retraction, but ten other newspapers and websites will have copied the story within five minutes, and by that time the damage has already been done."

Important for the brand

Although Pia Gideon sometimes feels harassed by the high tempo and the casual attitude to reliability of information in the "instant media," she enjoys many other aspects of her job.

"There will always be a great demand for good journalism. The Internet is an important form of news distribution today, but it will never replace exciting feature articles. High-quality magazines will still be alive and kicking a hundred years from now. No company can establish a strong brand image without making an impact in magazines," she says.

The media have changed dramatically in the past few years. The pace is faster, with a stronger global focus. The Internet has become a fast and important news medium, supplementing TV, radio and the press.

Journalistic priorities have also changed. More periodicals and websites are following the financial markets and business news, and TV and the daily press are devoting more space to these areas than ever before.

News agencies, websites, daily newspapers and analysts all want to have scoops and break the news before their rivals. Ericsson, which is one of the most closely monitored telecom companies in the world, is inevitably a storm center in this media turbulence. In her three years at Ericsson, Pia Gideon has seen rapid changes in the media world.

It is difficult to deny rumors, and rather pointless.

"There has been enormous pressure from the media in the past six months. Ericsson is in an unusual position in media terms – the systems business is outstanding, and 3G contracts are rolling in. But the mobile phone business is fighting an uphill battle, and this leads to a number of questions," Pia Gideon says.

She considers that there is a symbiosis between nervous financial markets and instant journalism. "The financial analysts are anxious to get their message across, and the news media want to obtain a scoop. And between them, they set the pace."

Major telecom companies are monitored round the clock, and Pia Gideon's telephone is always ringing. This calls for a clear message and expert spokespersons who know the company inside out and have a broad overview.

"Professional and charismatic spokespersons who can explain what a fascinating company Ericsson is are an invaluable asset. They have to explain complex technology, and they also have to convey a sense of excitement about the technologies we are developing. We solve this by having different spokespersons for general and specialist issues."

Prone to speculation

A well-balanced team of spokespersons is one basic requirement for building a strong brand, but another key aspect of information activities is greater awareness throughout the organization of the media situation the company is dealing with.

"Everyone has to be aware that what may appear to be innocuous information, seen in its proper context, may give rise to media speculation."

Pia Gideon heads a group of about 15 employees, with tasks ranging from day-to-day contacts with the press, TV and radio to long-term projects, such as corporate public relations, developing the Ericsson message, producing financial quarterly reports and writing speeches. They often have to respond quickly, but more staff and a round-the-clock roster help to ensure that the workload is manageable.

Pia Gideon is always hurrying to her next meeting, taking telephone calls as she moves down the corridor. She works long hours. How does she manage to survive?

"It may sound like a cliché, but working together is great fun, and we have an exciting job to do."

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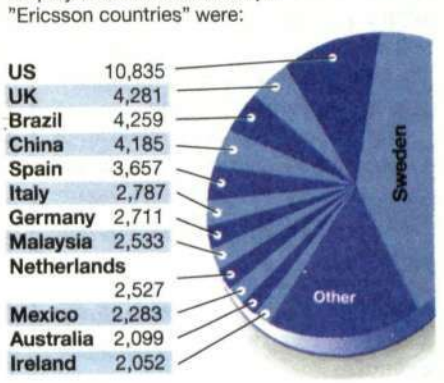
DID YOU KNOW THAT...

In September 2000, Ericsson had 103,395 employees – 41,822 of them in Sweden.

Employee totals in other major "Ericsson countries" were:



IP phone cited "best in show"

›› Ericsson's new IP phone, the Dialog 3413 desktop phone, has already received a prestigious award.

At the Communications Solutions Expo 2000 show hosted by TMC (Technology Marketing Corporation) in Las Vegas, the phone received the "best in show" award, which was won in competition with some 100 leading Internet companies.

The jury's motivation for the award was that Ericsson's IP phone contributes to the development of IP telephony and hastens the convergence between the data and telecom industries.

The phone also offers services that can improve individual productivity and reduce telephone costs, while maintaining voice quality.

Division dissolves on March 1

›› Division Internet Applications and Solutions is dissolved on the first of March, 2001.

The Internet application unit will become a part of the recently formed company Ericsson Internet Platforms, with Lars Boman as new president.

The regional parts of the division and the Internet Solution unit are transferred to Division Global Services.

Ericssons Microsoft Mobile Venture and EdgeCom will continue as before.

Haijo Pietersma, currently head of the division, has decided to leave Ericsson.

Finland's Sonera invests in 3G

›› The Finnish operator Sonera is now beginning to build a network for a third-generation mobile system.

The operator recently signed a three-year contract with Ericsson that includes radio access products and numerous maintenance services.

Sonera is expanding its existing GSM and GPRS network.

This is the 21st 3G contract that Ericsson has signed, which is more than any other telecom supplier.

Anni Vespäläinen

"Our long-standing partnership with Ericsson provides an excellent foundation for building a reliable 3G network," says Anni Vespäläinen, senior vice president at Sonera.

Tele1 Europe selects Engine

›› Operator Tele1 Europe has selected Ericsson's Engine solution for building out its data and telecom network in the Nordic region. Initially, Ericsson will supply two Telephony Servers, which will handle voice services, and four Media Gateways, which will link together operators in the Nordic region.

"This is a cost-efficient method for us to migrate our circuit-switched network to a packet-data network," says Tommy Ekström, technical manager for Tele1 Europe.

The business concept is to offer broadband solutions to medium-size and large companies in the Nordic countries.

Many operators follow GSM path to 3G

The US operator AT&T started a GSM wave that is now sweeping over Latin America. Operators Telcel in Mexico and Telecom Personal in Argentina are now changing to GSM networks. Greater availability of phones and services have enticed them to make the change.

Telcel and Telecom Personal will be the first operators in the TDMA-dominated countries to offer a GSM-based network, which will gradually be upgraded to GPRS technology to support higher data speeds.

"Changing from TDMA to GSM is a clear trend that we see in the North and Latin American markets right now," says Bo Bergström, manager for the GSM Systems business unit.

"Operators are attracted by the wide range of terminals and services and the smooth transition to Edge and WCDMA. This means tougher competition for Ericsson, but also greater business opportunities."

Both operators emphasize that the TDMA networks will operate in parallel with GSM networks for many years to come.

GPRS is a packet-switched technology that supports mobile Internet and other forms of wireless data communication at speeds up to 115 kbit/s.

Telcel will put a GSM network into operation during the third quarter that will be fully operational during 2002. Telecom Personal will offer GSM-based services from the second half of 2001.

"We chose Ericsson because of its industry-leading solutions for GSM and GPRS. A fast introduction of services later this year is extremely important for us," says Daniel Hajj, president of Telcel.

Ericsson has supplied systems to Telcel for more than ten years and to Telecom Personal since 1996.

Telecom Personal is Argentina's largest mobile operator, with more than two million subscribers.

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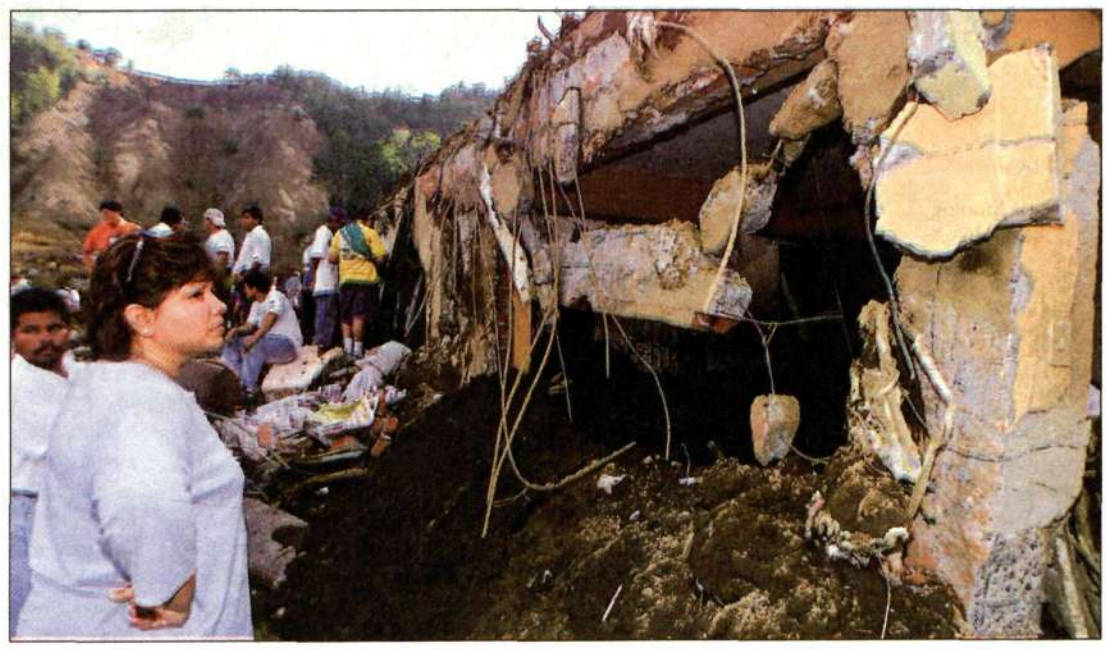
Disaster relief in action

The Ericsson Response emergency assistance program has been put into practice for the first time following the earthquake in El Salvador. A project manager was appointed to coordinate the company's efforts, which include a donation of USD 40,000 to the Red Cross in the form of shovels, rental cars and provisions.



Residents of the La Colina district of Santa Tecla inspect the damage following the recent earthquake. Intensive rescue efforts were in progress, and local Ericsson employees were working overtime to get the mobile telephone network up again. Photo: Yuri Cortez/Pressens Bild

Since the disaster on January 13, Ericsson employees from El Salvador and Guatemala have been working to secure mobile communications within El Salvador.

"Only a few hours after the quake, some employees were dispatched to check how the network was working. At the current time, one of the operators is working on the construction of a parallel network to ensure that it will continue to be possible to make calls," says Magnus Gall, acting president of Ericsson in El Salvador.

On the Monday following the earthquake, Carlos Andres Urrutia, from Ericsson in Guatemala traveled to El Salvador. He has received training for the Ericsson Response program. Statistics on deaths, injuries and missing have steadily increased. As Contact went to press more than 800 people had been found dead and 2,500 injured. 45,000 homes had been severely damaged and over 1,000 people were still missing.

Since the day of the earthquake, Ericsson employees in El Salvador have been working hard to reinforce the cellular network.

"Among other efforts we can provide general assistance by traveling to rural areas to assess damage there," says Dag Nielsen, who is responsible for the operational arm of Ericsson Response.

The most difficult work is being performed in the town of Santa Tecla, twelve kilometers west of the capital city of San Salvador, where 500 homes were destroyed by a landslide that swept down the mountain following the earthquake. Help has arrived to El Salvador from all parts of the world and United Nations Volunteers are offering humanitarian effort.

No Ericsson employees have been reported missing, however, according to Magnus Gall.

"We phoned all employees to make sure that they are all right. We have also been working hard to get telecommunications working again," relates Magnus Gall.

Since the big quake on January 13, more than 800 afterchocks have been recorded. Although they are small, they thwart rescue efforts and increase the risk that buildings with cracks may collapse.

Read more about the situation in El Salvador in the next Contact.

Ulrika Nybäck

Ericsson more important than ever for Sweden

Sweden's dependency on Ericsson increases for each year that passes. An increasing share of exports, more employees and a growing dominance of the Stockholm Stock Exchange are factors that contribute to making Ericsson's position in Sweden stronger than ever.

The Swedish daily Dagens Nyheter (DN) published a survey of Ericsson in Sweden and its developments over the last decade. DN concluded that Sweden has never been as dependent on any one company as it is on Ericsson today. Ericsson's share of total Swedish exports currently amounts to 16 percent, compared with 11 percent in 1996.

The number of Ericsson employees in Sweden has increased by 18,000 over the past ten years, from just over 30,000 in 1990 to 48,000 at present. Ericsson accounts for 22 percent of the value of the Stockholm Stock Exchange, up from seven percent in 1990.

Ericsson is also unique among Swedish multinationals in having so much of its operations, and nearly half of its employees, in Sweden. Ulf Olsson, Professor of economic history at Gothenburg University and one of the authors of the books about Ericsson published on its 100th anniversary in 1976, agrees with DN's analysis.

"What makes Ericsson so dominant is its large share of total exports," says Ulf Olsson. "Historically, however, Ericsson differs from other Swedish companies in that it has been so important over such a long time."

Ulf Olsson's expectation is that Ericsson will continue to be Sweden's leading company for quite some time to come. If the world's telecom companies should experience a dramatic downturn in demand, Ulf Olsson believes that Ericsson would fare better than Nokia, for example, which dominates Finnish industry in a similar manner.

"Ericsson's business is significantly more diversified than Nokia's, which is dependent on mobile telephony. In addition, Sweden's industrial culture has strong traditions that are lacking in Finland," concludes Ulf Olsson.

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Shopping tips directly on your mobile phone

Together with the ICA grocery stores, Scandinavian Airlines and Swedish Rail, Ericsson is conducting a number of test projects in which Bluetooth is being combined with WAP services.

When grocery items have been registered at the check-out counter, the total is electronically forwarded to the mobile phone on which all information about the ICA card is stored. With a few key presses, the customer can immediately debit the amount to his or her account. Similar projects are in progress with both SAS and Swedish Rail. Photo: Ecke Küller

The world's first Bluetooth-equipped store is ICA Stop, located in the northern Stockholm suburb of Täby.

With a Bluetooth phone, shoppers at ICA Stop can receive special offers while browsing the aisles. The information is delivered via WAP messages that are forwarded from a Bluetooth transmitter located in the ceiling of the store.

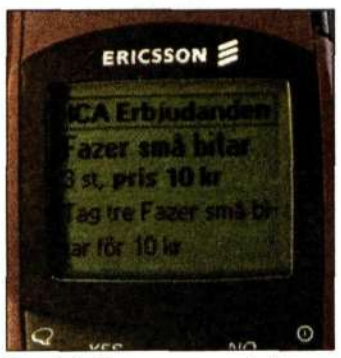
Via the phone, customers can easily see the balance in their ICA accounts, and when the grocery items have been registered at the check-out counter, approving the transaction only requires entering a PIN code on the phone.

Easy for everyone

"This technology makes things easy for both the customers and our employees. Electronic payments also contribute to improving the working environment," says Jörgen Wennberg, who is responsible for the banking operations that ICA is developing.

Currently some 1.4 million customers use their ICA cards for payment services, according to Wennberg, adding that sales now total about USD 1.7 billion per year.

Jörgen Wennberg believes that a popular service will be the ability to receive account balance information via a mobile phone.



Special offers are presented to shoppers on the display.

"We receive 400,000 caller per month from customers wanting to know the balance on their ICA cards," relates Jörgen Wennberg.

The store's special offers can be general or personalized.

One idea is that certain offers could function as an incentive system for loyal customers and those who make large purchases.

Mobile Internet opens many possibilities for personalized marketing.

This project is a collaboration between ICA, the marketing company Ericsson Sverige and the Consumer Products division.

Ericsson provides the technology, while ICA contributes knowledge of the customer. The test project has been in progress since June, and the companies involved will evaluate the results to determine the next step.

Another interesting project is being conducted in the travel sector, where Bluetooth is providing the infrastructure for information services. Together with SAS, Ericsson recently started a test project at Terminal 5 at Stockholm's Arlanda Airport. Ericsson equipped ten frequent SAS travelers with a Bluetooth phone.

Departure information

"When the passenger arrives at the terminal, he or she will receive flight information on the phone. The information is individually customized and includes the flight booking, any delays or re-routings, the best location for check in and the departure gate," says Thomas Larsson at Ericsson Sverige, who is responsible for contacts with SAS. The services will be tested over a one-month period. If they work well, SAS is very interested in a broader introduction of Ericsson's Bluetooth applications in its operations.

"This is just the start. Together with SAS, we see that many more useful services are possible than those now being tested," says Thomas Larsson.

In parallel with the SAS project, Ericsson is working with Swedish Rail on similar Bluetooth services to be launched shortly.

Jesper Mott
Jenz Nilsson

FACTS/BLUETOOTH

Bluetooth is a radio technology that Ericsson began developing in 1996.

Today, Ericsson works with a number of other companies on Bluetooth development.

A computer chip allows data to be transferred wirelessly between a mobile phone and a computer, for example. The range is about ten meters.

GSM World Congress in Cannes

From February 20 to 23, the 2001 3GSM World Congress will be held in Cannes, France. The conference and exhibition are the natural meeting place for everyone working in the GSM industry. Ericsson will be taking part in the event with both speakers and an exhibition.

"The theme for Ericsson is mobile Internet, an area in which we want to show that we are the leaders," relates Anna Carin Johansson, who is responsible for internal communications during the GSM Congress.

On February 20, Ericsson will arrange a seminar for 800 guests, consisting of customers who have been invited to the seminar by key account managers.

The customer seminar will be broadcast live via the extranet for those Ericsson customers who cannot be present in Cannes, as well as on Ericsson's intranet.

Virtual exhibition

During the 2001 3GSM World Congress, Ericsson's external website will feature a virtual exhibition with small demonstrations. News from the congress will also be published on the website.

New for this year are also special sites for PDAs and WAP phones on which short news items will be presented.

In addition to the stand in the exhibition hall, Ericsson will also have an outdoor pavilion between halls 1 and 2.

Hosting the Internet café

The indoor stand will feature demonstrations of applications and terminals, while the outdoor pavilion will showcase several system solutions, such as Edge, UMTS and GSM on the Net. Ericsson will provide its own GPRS coverage over the entire congress site.

"By demonstrating mobile Internet end-to-end, meaning all the way out to the end user, we will be able to show different applications for both work and leisure," says Anna Carin Johansson.

"This will strengthen the Ericsson brand with respect to the mobile Internet for both systems and phones."

Ericsson will also host an Internet café in Cannes. During the GSM World Conference, the GSM Association 2001 Awards, for which Ericsson has several candidates, will be announced.

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New company to help elderly

›› In collaboration with Swedish insurance company Skandia, Ericsson is establishing a new company in the health and safety sector. Alleato AB will use new technology to develop security, safety and health services for international markets.

Services include remotely controlled locks, fire and burglary alarms, health indicators and simple telemedicine services.

The services are primarily intended for people suffering from illness who wish to remain at home.

Ericsson and Skandia will hold equal shares in Alleato AB, which will also have Huddinge University Hospital as a minority owner.

New headset now in the stores

›› The first Bluetooth products are now available in retail stores.

At the end of last year, a first delivery of 10,000 Bluetooth headsets was made to stores throughout Europe, Australia and parts of Asia.

The headset requires an Ericsson T28, R320, T20, A2618 or other recent 3-volt model plus a software upgrade for the phone.

Bluetooth company gets new name

›› Ericsson Technology Licensing has been established as the name of Ericsson's newly started Bluetooth company in Lund, Sweden.

The company will take over most the purely commercial aspects of Bluetooth operations, including product development, marketing and sales.

IP networks catching on

›› Ericsson has signed contracts with Telia International Carrier and Telia Internet Inc. in the US for networks for IP telephony.

Ericsson will supply and install at least 25 IP routers for Telia International Carrier in both Europe and the US. The contract with Telia International Inc. calls for delivery of 20 IP routers in the US. Both contracts also include service collaboration and all routers are to be ready for commercial use during 2001.

Mobile services launched in Brazil

›› The Mobile Internet Institute in Brazil has developed a number of mobile Internet services for TDMA systems since the start of operations in April last year.

The institute is a cooperative effort between Ericsson and several local operators and developers. Services have been developed that allow users to access restaurants, hotels and pharmacies via their mobile phones.

"This is a major step in establishing Ericsson in the mobile Internet market in Brazil," says Kennet Larsson, who heads the Mobile Internet Institute.

HELLO THERE...

Lars Josefsson...

...who was recently appointed Senior Expert in Antenna Systems by corporate management. This is the most prestigious title a technical specialist can receive within Ericsson, and Lars is the first within Ericsson Microwave Systems to achieve this distinction.

What does this appointment mean?
– I'm not the only person to be recognized. Anders Derneryd and Björn Johansson are also being recognized as Experts. This is a strong endorsement of our work and our unit as a research center for all of Ericsson with respect to antenna technology. This is gratifying for all operations in Mölndal."

What background do you have that qualifies you for such an exclusive title that only a few people within Ericsson in Sweden have achieved?
– I have a degree in engineering from the Royal Institute of Technology in Stockholm and a doctorate from Chalmers University of Technology in Gothenburg. In addition, I spent a period at UCLA in the US as a guest researcher and was a guest professor in antenna technology at Chalmers in the 1980s. I now have a part-time position at Ericsson to allow me to devote time to being a guest professor at the Royal Institute of Technology.

One criterion for becoming a Senior Expert is international recognition. What is your international experience?
– I am in demand at conferences and symposia, and I have also arranged a number of international conferences and courses. Within the IEEE engineering society, I have been designated a fellow, which is the highest distinction within that body.

How long have you been at Ericsson Microwave Systems?
– Nearly all my life. I started in 1963 in the systems department where I worked with different types of radar systems, as well as with infrared technology. From there I went to the antenna department. Since then, growth has been rapid, and antenna technology has become much more sophisticated. Today, antennas and systems are tightly integrated.

How will this distinction change your daily work?
– It may mean that my colleagues and I work more actively and outwardly towards other Ericsson units. Such awards are a confirmation of our expertise by corporate management.

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China Mobile to build world's largest GPRS net

China Mobile has selected Ericsson as the principal supplier for its GPRS network. When the network is completed, it will be the world's largest.

New GPRS contracts have also been signed in Ukraine and Lebanon. China Mobile is now in the process of upgrading its nationwide GSM network to GPRS.

In the first phase, the upgrade will take place in 25 cities in 16 provinces, with a concentration to the wealthier coastal provinces.

Ericsson takes half

The project, in which Ericsson is taking the leading role, will be completed during the first quarter of 2001.

"Being chosen by China Mobile as the principal supplier is both gratifying and extremely exciting," says Erik Feng, Vice President of Ericsson China and key account manager for China Mobile.

"This was particularly prestigious, since there was very strong competition from other suppliers during the negotiations," adds Erik Feng.

Ericsson was able to win a contract for 47 percent of the deliveries, while competing suppliers Nokia and Motorola were forced to settle for 21 and 27 percent, respectively. The remaining share went to the domestic supplier Huawei.

"This is a major triumph for Ericsson and means that we strengthen our position within mobile Internet in China," says Erik Feng.

In addition to supplying and installing GPRS equipment, Ericsson's assignment includes training the operator's local employees in GPRS and daily maintenance of the network.

Several major orders

The Ukrainian mobile operator Kyivstar has signed a contract with Ericsson valued at SEK 950 million. Currently, Kyivstar is the fastest growing operator in the Ukrainian mobile market.

The contract, which is the first for a GPRS network in Ukraine, entails an extensive upgrade of Kyivstar GSM network that will include installation of both GSM 1800 and GPRS equipment.

Commercial operation of the new network is expected to begin in summer 2001. France Telecom Mobile Lebanon (FTML) is another operator that has chosen Ericsson as its GPRS supplier.

Ericsson is the operator's sole GPRS supplier and will supply a complete GPRS system with switching equipment that will increase the capacity of FTML's existing GSM network.

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Mobile phone use does not increase risk of brain tumors

There is no correlation between frequent mobile phone use and brain tumors.

This was the conclusion of two independent medical studies recently presented in US medical journals.

Opinion is divided regarding health risks with mobile phones. According to two recent studies, however, there is no correlation between mobile phone use and brain cancer. Photo: Lars Åström

On December 19, the New England Medical Journal presented the results of a major study on the relationship between mobile phone use and the occurrence of brain tumors.

No increased risk

The study, which was conducted by the National Cancer Institute (NCI) in the US, is based on 782 American patients who were diagnosed as having cancer between 1994 and 1998. A total of 799 patients who had visited the same clinic but received other diagnoses was used as a control group.

"The results provide no support for the contention that people who use mobile phones often run a greater risk of cancer than other people. Nor were tumors more frequent on the side of the head on which phones were used," notes Peter Inskip at NCI, who was responsible for the study.

Another research group sponsored by the US government and the mobile phone industry drew the same conclusion from its research project. This report was published in the Journal of the American Medical Association on December 20.

No correlation

"Facts show that use of mobile phones does not correlate with an increased risk for brain cancer," says Joshua E Muscat, who led the research. The study included 489 cancer patients between the ages of 18 and 80. Just as in the NCI study, a control group of 422 patients was used for this study.

Jenz Nilsson

Partnership for broadband solutions

Ericsson has entered a partnership with the US company Zhone Technologies Inc. Zhone will develop products for Ericsson's Voice-over-DSL solution that will be marketed by Ericsson throughout large parts of the world.

Although scarcely more than one year old, Zhone Technologies Inc. already has two main products for an integrated VoDSL solution, Z Edge 64 and Sechtor100, that interest Ericsson. These and other products that Zhone is now developing will be included as part of Ericsson Multi Service Networks' Engine Access Ramp product package. With this partnership, Ericsson is taking the lead in VoDSL.

"The agreement means that Ericsson will have an exclusive right to market and sell these products in large parts of the world," says Lorenzo Micheletti, marketing manager at Zhone.

"Operators can offer end users both voice and data services over the same copper wire in their access networks. Previously, this has only been possible with leased lines that are expensive for customers," says Mats Bern, who heads product management at the Access Network unit within Multi Service Networks.

Mats Bern and Lorenzo Micheletti are pleased with the agreement that will allow Ericsson to offer total VoDSL solutions.

Photo: Johan Fritz

"There is considerable interest for these products among business leaders, and our goal is to introduce the first Ericsson/Zhone solutions in the European market by April," concludes Mats Bern.

Launches will follow thereafter in Asia, South America and Africa.

Jenz Nilsson

New model a big seller

Year 2000 was a record year for mobile phones. Never have so many phones been sold in Sweden, with sales rising to 2.4 million units.

Sales of mobile phones continue to increase. Anna Hultman shows off Ericsson's new T20. Photo: Lars Åström

After a rash of criticism, Ericsson can stand up and take a bow – the new T20 model recorded extremely strong sales toward year-end. The T20 model introduced in November 2000 has been a sales success, receiving favorable product reviews in virtually all daily newspapers and magazines.

"Sales of the T20 have been bolstered by newspapers and radio stations in several countries that named Ericsson's new phone the Christmas Present of the Year. The new model has achieved a solid breakthrough in the customer groups we had targeted," says Peter Bodor, press chief of the Consumer Products division.

Never before have so many mobile phones been sold in Sweden, with sales totaling 2.4 million units in 2000, compared with 1.75 million in 1999. Mobile penetration has reached a very high level, and 70 percent of all Swedes now own mobile phones.

"We have noticed that people have more money to spend now that Sweden's economy is booming. Many targeted campaigns, such as attractive offers from operators to renew or prolong subscriptions, and buy a new telephone at the same time, have been accepted by a large number of consumers," says Stefan Gidlund, executive vice president of retail chain Geab.

Mobile phone sales increased by 40 percent last year, with the sharpest increase noted among private consumers, both young and old. According to Stefan Gidlund, people in the 12–16 and over 60 age groups are buying more mobile phones than ever before. He also believes, however, that sales in 2001 are more difficult to project.

"We don't know how long the strong economic conditions will be sustained, and we're approaching a technology shift. The first GPRS phones will hit the market this year and I believe the WAP market will start to take off. Consumers are now ready for WAP. They have started to understand which services they can use. Operators will also have to rethink their strategies, in terms of customer value and services, and talk less about technologies," says Stefan Gidlund.

Nokia 3210 was the market's best-selling model last year. Ericsson's market share for mobile phones in Sweden is between 20 and 30 percent.

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Alliance for CDMA products

»» Ericsson and 3IC, a Korean CDMA company, have signed a strategic agreement for the distribution of Ericsson's wireless data communications equipment in Korea.

Under the agreement, Ericsson will make a capital investment in 3IC in return for a minority interest in the company.

3IC will distribute Ericsson's CDMA wireless data products, including its cdmaOne Interworking Function (IWF) and Packet Core Network (PCN) for cdma2000, a 3G version of cdmaOne.

IWF will be a key component in 3G upgrades to cdma2000 PCN, which will provide direct access to the mobile Internet and IP services.

Name change announced

»» Ericsson Amplifier Technologies is the new name of Microwave Power Devices, a company acquired by Ericsson in autumn 2000. The internal designation is AMT.

Situated on Long Island in New York, the company develops and manufactures linear power amplifiers.

Kenneth Johansson has been named President of Ericsson Amplifier Technologies.

Kenneth Johansson has worked for Ericsson in the US for 14 years, most recently as head of Ericsson Radio Access Operations in Lynchburg.

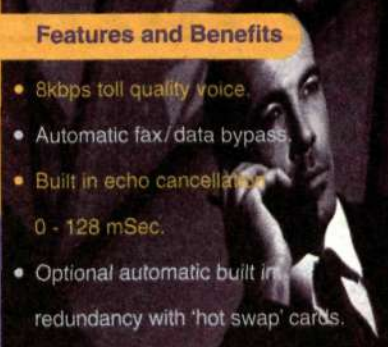
Compression Solutions From Ericsson

From our satellite solutions products - a new voice compression system that enables up to twelve E1/T1 circuits to be multiplexed onto a single E1/T1 bearer, equally useful for satellite and other forms of bearer circuits.

The Ericsson Linkcom 2000 compression solution is an advanced and compact system for efficiently increasing bearer link capacity. The modular sub racks can be equipped with from 2 to 12 E1/T1 trunks, all the equipment is accommodated in a compact PCI 19 inch sub rack, which can also include optional power, trunk and bearer redundancy, making the Linkcom 2000 an exceptionally reliable unit. Operational in networks having over 1.2 billion logged call minutes / week, being AC or DC powered, the unit's compact dimensions and powerful network management system makes the Linkcom 2000 simple to install and maintain.

Features and Benefits

- 8kbps toll quality voice.
- Automatic fax/data bypass.
- Built in echo cancellation 0 - 128 mSec.
- Optional automatic built in redundancy with 'hot swap' cards.
- Compact size - up to 360 voice channels in 4U, 19 inch sub rack.
- Comprehensive network management tools.



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Motorola earnings as expected

»» Motorola's fourth quarter report, published January 10, matched the low expectations of market analysts. The company's problems mostly involve its mobile phone business area, where profits fell by 69 percent compared with 1999.

Net earnings for the fourth quarter were USD 330 million, compared with USD 560 million for the year-earlier period. Revenues rose from USD 9.1 billion to USD 10.1 billion.

The quarterly report was in line with market expectations. The company had issued a profit warning earlier in the autumn.

Nokia increases market share

»» Nokia has lowered its forecast for global sales of mobile phones during 2000 to 405 million, which is despite the fact that Nokia's own sales increased by more than 60 percent to at least 128 million phones.

According to fresh figures from Gartner Dataquest, Nokia also increased its global market share to 30.6 percent during the third quarter.

Portugal issues four 3G licenses

»» Portugal issued four 3G licenses in a beauty contest shortly before Christmas. The winners were Telecommunicacoes Moveis Nacionais (which is owned by Portugal Telecom), Telecel (Vodafone), Optimus (part of Sonae SGP) and Oni-Way (a consortium led by the electricity supplier Electricidade de Portugal).

The fixed price for each license is USD 85 million.

WCDMA gains new ground in analysis

»» About one billion subscribers will be connected to 3G mobile networks by 2002, but only 6 percent of them will be using the cdma2000 3G standard, predicts the Canadian analysis company Dundee.

Even countries that already have a large base of second-generation cdma networks, such as South Korea and Brazil, are choosing the WCDMA 3G standard in preference to cdma2000.

Arch-rivals initiate collaboration on 3G

One of Ericsson's largest customers, Telia, can now breathe a sigh of relief following a nervous period without a 3G license in Sweden.

The company has initiated collaboration with its former arch-rival, Netcom/Tele2, to jointly construct a 3G network.

Telia has finally joined the 3G race. The company will collaborate with Netcom/Tele2 in the construction and operation of a third-generation mobile phone network. Netcom's president, Lars-Johan Jarnheimer participated in the press conference via large-screen TV. Telia's acting president, Marianne Nivert was noticeably relieved to have found a solution to the license issue. Photo: Gunnar Lundmark

Marianne Nivert, the previously embittered acting president of Telia, is smiling again. Following the Swedish National Post and Telecom Agency's (PTS) unexpected decision not to award Telia a 3G license, things are once again looking up for the company.

"This is absolutely the best collaboration we could have hoped for," said a happy Marianne Nivert during a press conference.

Will compete

Last week, Telia and Netcom announced that they intend to jointly build a third-generation mobile phone network.

Tele2's license will be utilized by placing it into a jointly owned company where Telia and Netcom each own 50 percent. The jointly owned company will construct a nationwide network that will be jointly operated. Once the network is constructed, the two companies will offer competing services.

Critics worry that cooperation between the boards of the two companies could be difficult, following previous conflicts in the form of legal action, lawsuits and complaints, according to the newspaper Dagens Industri.

Reduced costs

Jan Stenbeck, who owns Tele2 and Netcom, offered Telia free access to their 3G license in exchange for Netcom receiving a 50 percent share in the joint venture company, although the company currently only has two-thirds as many customers as Telia.

Telia has 3.1 million mobile phone subscribers and a mobile network with 4,000 base stations, while Netcom has 2 million subscribers and a network with 1,500 base stations. For Netcom, the collaboration means lower investment costs and a chance to quickly attract many customers to the new network.

Neither company has expressed any concerns over the fact that the new network will not have sufficient capacity. The PTS is expected to assign additional license capacity for 3G networks around 2005.

At the time of writing, Europolitan still had no partners lined up to share its 3G license, although the company's president indicated that they are open to collaboration, although on different terms than Telia–Netcom.

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Mayumi Nishino, Aki Suzuki and Minako Ueyama. Three Japanese women who use mobile data services, the web and e-mail on a daily basis. They do so despite not having Internet–connected computers at home, which are fairly unusual in Japan. Photo: Mats Lundström

Experienced mobile users

Japanese women are the world's most experienced users of mobile services.

Contact met with three Japanese women who get maximum usage out of their mobile phones.

Aki Suzuki, 25, has an animated dog as a screensaver on her phone. Mayumi Nishino, 22, checks delays in the Tokyo subway system. Minako Ueyama, 38, subscribes to daily Peanuts comic strips.

All three live in Tokyo and work in the fashion industry. They are also typical users of various mobile services.

But what does this mean in practice, and how does it differ from mobile phone use in other countries? In order to find out, Contact met with Aki (who uses a J-Phone), Mayumi (i-mode) and Minako (J-Phone) to discuss their mobile phone habits.

We meet in a skybar on the 40th floor and the first thing Mayumi discovers is that there is poor coverage.

"That's what happens when you go into skyscrapers. I-mode also works poorly in the subway," says Mayumi.

"My J-Phone works very well on the Hibiya line," counters Aki (referring to one of the major subway lines in Tokyo).

"When you call an i-mode user and hear scraping sounds, however, you know your call is about to be broken off. That happens frequently."

After the three women have aired their complaints, we turn to a more detailed discussion of various services, subscriptions and mobile phones. Like most Japanese, they are very well informed about different phones and services.

E-mail more common

Aki sends up to 20 text messages a day and talks equally often on her phone. While Mayumi sends almost as many messages, she doesn't talk as much. Both prefer e-mail over older, more difficult-to-use versions of text messaging (similar to SMS in the GSM world).

An e-mail address for i-mode is based on a user's telephone number – for example 09023216344@docomo.ne.jp.

"It's becoming increasingly commonplace for people to send e-mail rather than text messages. For me, it splits about 50–50. I've just switched over to using an e-mail address," says Aki. "At most, I send 20 messages a day. If I had more time, I would use it even more."

Very inexpensive

Within the J-Phone and i-mode systems, it is very inexpensive to send messages. It only costs a few pennies, while it is several times more expensive to send messages to other mobile networks.

As we speak, Aki receives an e-mail from Minako, who is running a little late. Minako's message is in the form of a "skymail" (e-mail via J-Phone's J-Sky service).

Aki uses the phone's vibrating function to alert her when a message arrives. There is etiquette to be followed when receiving calls in public places in Japan. Consequently, phones have a so-called "manners button" that immediately switches them over to quieter operation.

Aki and her friends make use of a whole host of mobile services every day. In addition to finding recipes and playing games, Mayumi checks train schedules, which are important in Tokyo since many of the lines cease operation at different times.

Aki checks the weather report every day.

"When I'm really, really bored, I'll check horoscopes and tarot cards."

When Minako finally arrives, she describes her childish enthusiasm for Snoopy.

"I download him every day and have a choice of comic strips. The service costs 1,000 yen (USD 8) a month, although it's difficult to keep track of where your money is going with subscription services," says Minako.

While Minako is an avid communicator, using both voice calls and e-mail, Aki tops them all.

"I pay a package subscription price of 10,000 yen (USD 80) per month. That gives me a 30 percent lower rate instead of having to pay for every call and connection. Even so, my monthly bill still amounts to around 16,000 yen (USD 130)," says Aki.

Almost flushed away

All three are satisfied with their phones, even though they would prefer to have J-Phone's new model with a built-in camera. They also switch phones frequently, at least once a year. And they prefer phones that they can fold closed.

Have any of them experienced a phone that broke? Yes, all three have had that happen.

"I once dropped mine in a toilet. I tried to return it, but as it turned out, there was a little spot inside the battery that changes color if the phone has been immersed in water," says Aki.

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In the lead with wireless services

Ericsson carefully monitors developments in the Japanese market.

"Driving forces there are not that different from other parts of the world. It is the focus on consumers that is the crucial factor," says Michael Björn, the new head of Ericsson's Mobile Internet Solutions unit in Japan.

With tens of millions of wireless service users, Japan is by far the world's most highly developed market. At the same time, Japan differs from other telecom markets in several significant respects as a result of unanticipated levels of growth during the latter half of the 1990s.

Japanese consumers are at the core of all this growth, especially the younger generations.

"Even if Japan is an urban nation, usage has spread throughout the entire country. It has even reached the older generations, although it is the young people who are driving development," says Michael Björn.

Michael Björn

He has conducted ongoing studies of the Japanese market for ConsumerLab in recent years.

Started with a fiasco

Similar benchmark studies have been conducted by ConsumerLab in several of Ericsson's markets, but since Japan has made the most progress in mobile services, these conclusions are especially interesting.

"Japan has distinguished itself in many ways. At the same time, our analyses have shown that the driving forces for adopting new services are not that different from other parts of the world," Michael Björn says.

"For example, it's mostly young people in Europe who are interested in WAP, although its introduction has been hampered by a heavy-handed technical emphasis."

The decisive factor in the breakthrough has been the reception of mobile datacom services by the Japanese public. Although this is nothing new, what is surprising is that it was not the plan initially.

"DoCoMo launched its first wireless packet data service in 1997. It was aimed at businessmen with laptop computers and was a real fiasco."

Following that failure, DoCoMo was forced to radically rethink its strategy, and it was then that an engineer by the name of Keiichio Enoki, together with Mari Matsunaga, an entrepreneur, formed i-mode (see Contact 16/2000).

The success of i-mode and competing services such as J-Sky and Ezweb, will result in 75 percent of mobile phone users taking advantage of datacom services during the coming year, primarily various Internet services.

Competing services

"Few Japanese have had Internet access at home for any length of time," says Michael Björn. "That's why telephones are synonymous with using the Internet."

Some claim that the reason for this widespread usage is that Japan has its own standard for infrastructure, PDC, which has protected Japanese manufacturers of systems and terminals. Michael Björn disagrees.

"Unlike the GSM world, it is complicated to send short text messages (SMS). There are several competing, incompatible services, even within the same network. People who use SMS in Japan have no problem in turning to mobile e-mail services, which are much easier to use," says Michael Björn.

He also emphasizes the evolutionary development that Japan has experienced – a strategy that has involved taking small steps.

"3G and WCDMA are not being viewed as revolutionary, but rather as improvements. The Japanese do not want to have to buy a new phone when WCDMA goes into operation. They'd rather have the same phone, just better."

Mats Lundström

Loyal wireless enthusi asts

Finland has the world's highest mobile phone penetration rate. Two years ago, mobile phones surpassed wireline phones in total number of subscriptions. Ericsson employs 1,000 people in the country, many working in some of the most important 3G technology development units.

Photo: Lars Åström

➤ Finland is one of Ericsson's oldest and closest markets. Ericsson established operations there in 1918 and has been involved in mobile phone development ever since the first NMT system was introduced 20 years ago.

From Ericsson's perspective, the Finnish market is not very large in terms of sales. Although it has the highest mobile phone penetration rate of any nation in the world, Finland has only just over five million inhabitants. This year, a total of 1.35 million terminals will be sold in the country. Ericsson's market share is for mobile phones in Finland is around 15 percent.

Needless to say Finland is strong hold for the native manufacture Nokia. This loyalty is not surprising given the fact that the country is completely dependant on the Finnish mobile phone giant, which accounts for 20 percent of the country's exports and 60 percent of the value of the Helsinki stock exchange.

Rapid development

Another distinguishing characteristic of the market is that Finns are quite advanced when it comes to adopting new technology, and especially new services. Veli-Matti Mattila, President of Ericsson in Finland, believes that Ericsson should take better advantage of that fact.

Veli-Matti Mattila

"Finland is an advanced market, even compared with other Nordic countries. New technology arrives here first, before it becomes popular throughout the rest of Europe and the world. In that respect, I believe it's important that Ericsson seize the opportunity to utilize Finland as a test market for new ideas," says Mattila.

Veli-Matti Mattila believes that Ericsson should conduct more field-testing in Finland. In his opinion, it is better to first test a business model in a small, progressive market to see how it operates. Production can then be fine-tuned and increased accordingly. He also wishes that there would be greater sensitivity to developments occurring in the marketplace.

SMS a huge market

One example is what has occurred with the development of SMS services. In Finland, the SMS service has become extremely popular, and not just for sending messages between friends. Young people are using the service to download ringer signals and small pictures to their phones. These signals and images are ordered over the phone at a cost of between USD 0.50 and 1.

In just a short period of time, this has turned into a multimillion dollar industry that has surpassed commercial television sales. For Finland's largest mobile phone operator, Sonera, SMS now accounts for almost ten percent of revenues.

At the same time, new companies are creating services and newspapers regularly publish lists of the most popular ringer signals. This trend is catching on in other countries, including Sweden, although its roots are in Finland where it is still the most popular.

Veli-Matti Mattila is himself a frequent SMS user. Sometimes he sends SMS messages to his secretary while sitting in meetings. That way, he can get things done without disturbing the meeting.

Over 90 percent of the population in Finland between the ages of 15 and 65 own a mobile phone. In 1998, the number of mobile phone subscriptions exceeded those of wireline subscriptions. It is believed that within a few years time, penetration rates will exceed 100 percent.

"People already have multiple phones for various occasions – one for work and another for social or recreational activities. That's why design is so important, even more so than the technology itself," says Peter Åhman, sales manager for consumer products at Ericsson in Finland.

Expensive phones

In Sweden, mobile phone buyers have become accustomed to paying almost nothing for their phones. It is common for phones to only cost one Swedish krona when simultaneously signing a subscription contract.

In Finland, that practice is forbidden by law. Operators are not allowed to subsidize phones in order to attract subscribers.

That means that people in Finland have to pay the entire cost of mobile phones themselves, which can range from USD 200 to 500, depending on the model. On the other hand, per-minute rates that operators charge are lower than in Sweden.

"I think that's good. It makes it easier for subscribers to compare prices. Moreover, it allows customers greater freedom in switching between operators," says Peter Åhman.

While Nokia is the biggest in terms of mobile phone sales, when it comes to sales of mobile systems Ericsson wins time and again in foreign markets.

Last spring, Ericsson signed the world's first WCDMA contract with the new Finnish operator 2G/3G, one of four operators to land a 3G license in Finland's beauty contest.

In mid-December, Finland's largest operator, Sonera, also announced that it has selected Ericsson to be the supplier for its 3G network. The other operators are expected to announce shortly which suppliers they will be contracting. Ericsson was also previously selected as the sole supplier for the GPRS and 3G networks being built by the Åland Islands' mobile phone operator.

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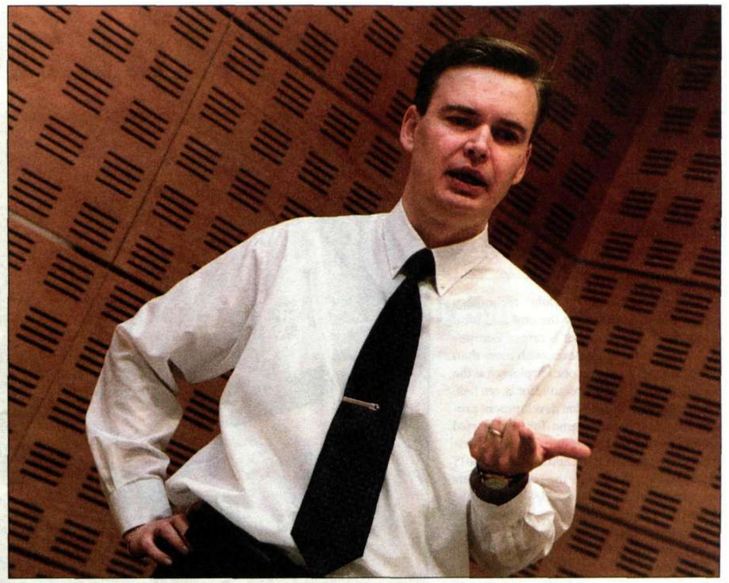
FACTS/**FINLAND**

Inhabitants: 5.2 million.
Wireless penetration: 74 percent or almost 90 percent of the adult population.
Ericsson employees: more than 1,000 (Sept. 2000), including 700 in research and development.
Ericsson sales in Finland: USD 170 million (1999).
Market share, mobile phones: approximately 15 percent.
Internet penetration: 42 percent.
Number of saunas: 1.6 million.



Anssi Kulju oversees one of the development units in Jorvas – Radio Access Networks. The WCDMA platform is one of the products being developed there.

Jorvas a center for 3G research

In the town of Jorvas, just west of Helsinki, some 700 Ericsson employees are involved in research and development activities. Most of their work is focused on 3G projects, which include both software and hardware.

➤ "In theory, we could construct a WCDMA network with the products that we're working on here," says Anssi Kulju, head of one of the development units.

Finnish engineers have been involved in the development of mobile telephony products since its infancy. It all began with NMT 450 in the early 1980s and has continued with virtually every step along the way leading up to today's 3G technology.

Consequently, Ericsson in Finland has assembled significant expertise, making the development unit one of the company's most important.

It is here that the WCDMA platform, among others, is being developed. This includes both hardware and software.

Combined development

"We benefit from the fact thats both portions are developed together. That way, software developers can easily test their code in the hardware on site, as well as have informal discussions about problems with hardware developers over coffee," says Anssi Kulju.

Kulju oversees the Radio Access Networks development unit, which is developing the software portion of the radio network controller for the WCDMA radio access network. Work is closely coordinated with development units in Kista and Linköping.

Seven other development units are also located in Finland, all of them focused on mobile telephony and the mobile Internet in one way or another.

Other products that they are involved in include the development of media gateways, IP solutions and the Cello platform. Six of the units are located in Jorvas, the seventh in Oulu.

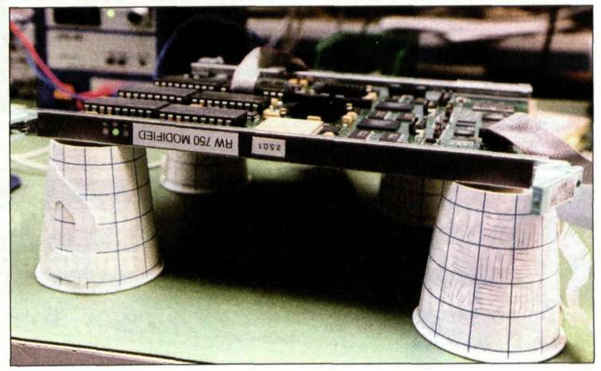
The Helsinki area is home to numerous computer and IT companies. Ericsson in Finland has a special program in place to assist newly trained engineers, ensuring that they have an opportunity to complete their degrees. This has become necessary in order to ensure that the company has the skilled workforce it requires.

Personnel shortage

Nevertheless, there is still a shortage of skilled employees. One way to ease this shortage has been to hire four Hungarians on a consultant basis. Two of them will be employed full-time once their consultant contracts expire.

"Eastern European engineers are very knowledgeable and skilled. We also have an engineer from Ericsson in Moscow here, but I think that we could utilize the resources from Eastern Europe even more," says Anssi Kulju.

Lars-Magnus Kihlström



The Cello platform is one of the products being developed in Jorvas. During testing, reliable anti-static supports are required. Empty coffee cups provide an ideal solution.

Security in Teknopolis

Oulu, way up north in the Gulf of Bothnia, is one of northern Europe's largest IT centers. Last autumn, Ericsson opened a Development Department for IT security in Oulu.

Kimmo Takanen, manager of Ericsson's Development Department for IT security in Oulu, studying "the secure telephone" – a gift from the local telephone company. Photo: Lars Årström

➤ Teknopolis, the name of Oulu's technology center, was established by the city and local university in 1985. Today, it is one of Europe's largest technology complexes, with more than 200 IT companies and 10,000 employees at the center, of whom Nokia accounts for about half.

After working with Nokia development projects for a few years, Kimmo Takanen started looking around for something new and different. But it was difficult in Oulu. Although the IT industry is big in the city, the people who are not employed by Nokia still work for the Finnish company in one way or another.

So when Ericsson announced last autumn that it planned to start a new unit in the city, Kimmo Takanen was quick to react. Today, he is the manager of Ericsson's new research unit in Oulu, with a staff of 20 employees that is expected to increase to about 50 by the summer.

Brought a few colleagues along

"What I like the most is that Ericsson in Finland is really a quite small company. I've gotten to know most of the company's employees, and I can phone the company President, Veli-Matti Mattila, and talk to him whenever I need some information," says Kimmo Takanen.

He also brought four of his former colleagues from Nokia to Ericsson.

"I haven't heard too much ribbing from my former colleagues at Nokia. I think many of them have probably wondered what it would be like to have Ericsson as their employer. I believe it was a good move, in general, for Ericsson to establish operations here in Oulu. Companies like Ericsson are needed to sustain the region's development and growth," says Kimmo Takanen.

For the same reason, it was fairly easy to recruit the unit's first 20 employees. Many of them came from the government's mobile telephony research center in the area and the university.

"Most people are familiar with Ericsson, and I haven't had any trouble recruiting new employees."

Increasing number of women

There are only two women in the unit, which is due largely because, by tradition, very few Finnish women have ever studied or pursued careers in engineering.

"But their numbers are increasing constantly. When I started at the university, we were only seven women in a class of 180 students. This year, 30 women began their engineering studies at the university," says Kaisu Mäkelä.

Kimmo Takanen's R&D unit works on IT security, an area that will assume greater importance with the emergence of third-generation mobile telephony, which operates with close links to the Internet. The most important concepts are authorization, encryption and verification. Authorization guarantees that a subscriber uses services that only he/she is entitled to use, for example, to access a bank account.

Encryption prevents non-authorized persons from decoding signals or listening to other people's conversations.

Verification, conversely, provides a guarantee for the caller that he/she is actually connected to the intended party, and not a person who claims to be a bank representative, for example. The unit is also working on an Internet Key Exchange (IKE) system.

"By nature, the Internet is not secure. However, when payments are made or other forms of business are conducted via the Internet, customers must know they can trust the system. Our technique provides that security."

Lars-Magnus Kihlström

Idyllic small-town makes its mark

➤ It's early afternoon, but darkness has already started to descend. The clouds and falling snow have stolen what little daylight remains here in the dead of winter. The city's main street is lined with low-rise structures that were modern when they were built in 1970s, and the sidewalks are occupied mostly by retired men and women fending for themselves against the bitter-cold winter winds.

"In the summer, tourists come here and ask where the telephones are made, but the only remaining building is the old rubber plant, and even the name of that has been changed," says a clerk in the sporting goods store.

We are in Nokia, the place that gave its name to Finland's pride, the company with the same name. Here, like the rest of Finland, almost everybody has a mobile phone, and most people choose their brand with a sense of national pride.

"I have a Nokia, of course, it's Finnish like me," says a young woman, almost surprised to be asked about something so obvious.

Janne Kangas manages a telephone shop on the other side of the street. Last spring, he received a certificate to open one of Finland's 80 service stations for Ericsson telephones. In the window is a large display of an R310 handset.

"That's my best-selling model at the moment. Having a certificate also helped me when I started up last spring, " Janne Kangas says.

Lars Magnus Kihlström

The village of Nokia gave its name to the telephone company. Today, only a rubber factory remains.

Solve your board-level timing problems.
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133MHz operation.
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idteurope@idt.com

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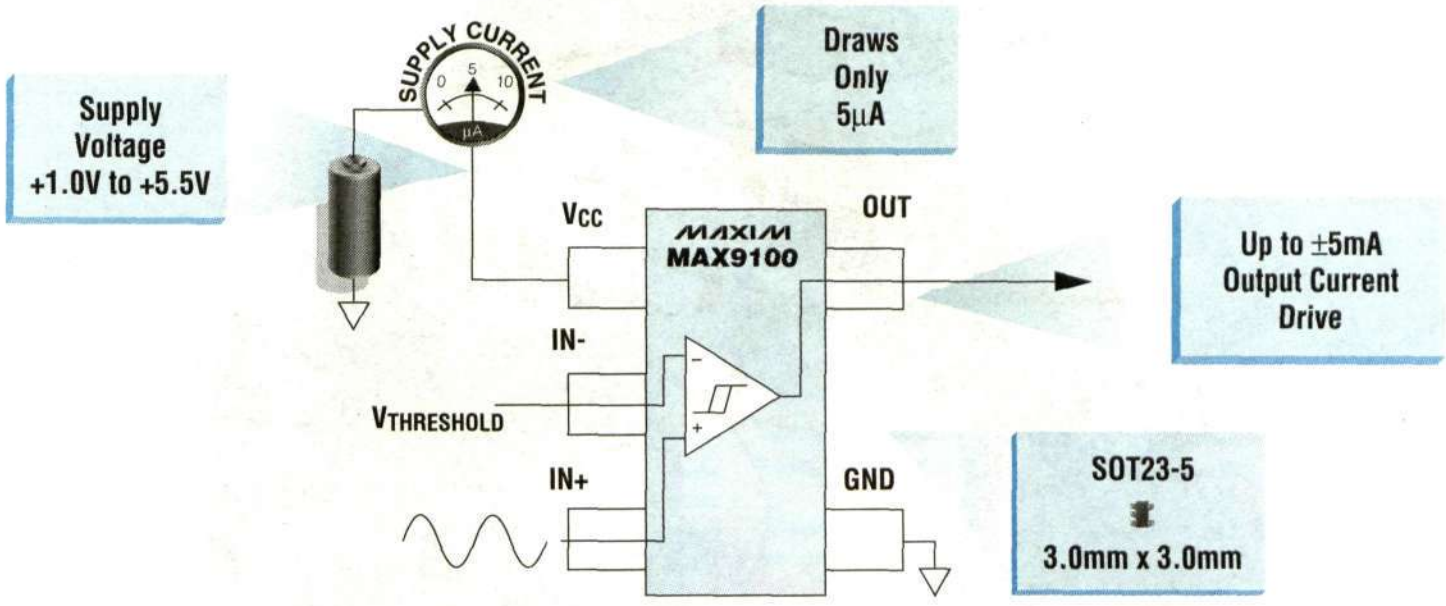
Guarantee Operation Down to +1.0V, Draw Only 5µA



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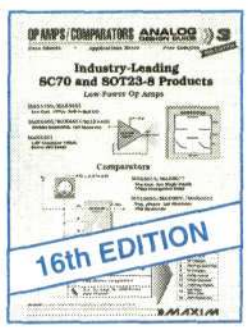
- Low 5µA Supply Current
- Open-Drain Output Version Available (MAX9101)
- Rail-to-Rail Outputs
- 4µs Propagation Delay
- Available in Space-Saving SOT23-5 Package

PART	NO. OF COMPARATORS	OPEN-DRAIN OUTPUT	SUPPLY VOLTAGE RANGE (V)	RAIL-TO-RAIL OUTPUT	PROPAGATION DELAY (µs, typ)	PIN-PACKAGES
MAX9100	1	No	+1.0 to +5.5	Yes	4	5-SOT23, 8-SO
MAX9101	1	Yes	+1.0 to +5.5	Yes	4	5-SOT23, 8-SO



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A successful journey

Ericsson Mobile Data Design is a company that has seen a remarkable transformation – going from a basement operation at Televerket Radio in Gothenburg to a place in the limelight at the forefront of Ericsson's efforts for next-generation mobile telephony.

Operations at Ericsson Mobile Data Design rest securely in the hands of company President Åke Johansson. He has been involved since the company's inception back in the early 1980s, when it took its first feeble steps at Televerket Radio in Gothenburg.

Photo: Anna Rehnberg/ Kamerareportage

➤ Those who have written off Mobitex have done so prematurely. It is easy to get the impression that the system, with its low bandwidths and simple, text-based interface, will become hopelessly antiquated with the arrival of 3G, which will bring broadband multimedia to every mobile terminal within just a few years.

But this is not the case. In fact, just the opposite. Over the past two years, Mobitex operations have experienced an upswing unparalleled in its fifteen-year history. In other words, a late but welcomed breakthrough.

Great position

The fact is that Mobitex has never been in as favorable a market position as it is now – and this is in part thanks to new mobile systems, not in spite of them. Pontus Lundqvist, head of the 150 person-strong Mobitex operation, explains.

"Since we started talking about UMTS, Edge and GPRS, there has been an incredible focus on mobile Internet. Dozens of new players are entering the market. All of them would like to earn money on this new trend, but not all can afford to invest in a 3G network. For them, Mobitex is a very cost-effective alternative for many of the services that will be available for mobile Internet."

If Japan's i-mode is currently the most successful application for mobile Internet, then Mobitex – as applied by US operator BellSouth Wireless Data – comes in a strong second.

With 93 percent coverage of the US market, and a doubling of the number of subscribers every eight months, BellSouth has generated a huge amount of business in just a short period of time.

Interest exploded two years ago when the new Interactive Messaging service was introduced. For the first time, it became possible to send wireless e-mail from a simple, compact handheld device, tailor-made for that purpose.

"Today, new terminals are driving the development of Mobitex services," says Pontus Lundqvist. "Palm has added an internal Mobitex modem to one of its handhelds and other manufacturers have followed suit. Today, Mobitex users in many of the roughly 30 networks that exist worldwide have access to services such as WAP, e-mail, e-commerce and stock trading from their terminals."

Rooted in packet data

While the technology has always revolved around packet data, it wasn't until the Internet took off in the mid 1990s that the technology became popular.

Since its inception, Mobitex operations have all been about packet data. While it is leading edge technology today, twenty years ago there were not many who knew what packet data was, much less what it could be used for.

The company quickly gained momentum and in 1986, a few years after it started, Televerket launched the first packet data radio network under the name Mobitex – a name that would become synonymous with what is now Ericsson Mobile Data Design, long into the 1990s. Over the years, operations have grown considerably.

Today, Åke Johansson leads an organization that employs almost 1.000 people. Responsible for GSM-nodes for GPRS and important components for UMTS and Edge, the company is playing a central role in Ericsson's focus on the future of mobile telephony.

In 1988, two years after the introduction of the first Mobitex network, operations were transferred to Eritel, a subsidiary formed by Ericsson and Televerket.

Took off

While work on Mobitex continued, new mobile phone operations overshadowed the company, leaving Eritel to pass time in relative anonymity. It was only in the mid-1990s that the operation began to see more serious marketing efforts. In 1994, Ericsson took full control. Eritel become Ericsson Mobile Data Design about the same time the Internet was making its big breakthrough. Suddenly, packet data became a hot item and the company ended up the focus of everyone's attention. The small engineering company – which for years had faced an uphill struggle but remained driven by a passionate interest in technology – was brought in from the cold.

A few years ago, competition from consulting firms with their high salaries was fierce, but that is no longer the case today. Now, engineers are seeking out positions wherever leading edge technology can be found. And for that reason, Ericsson Mobile Data Design has become a natural choice.

Niclas Henningsson
freelance journalist

FACTS/ERICSSON MOBILE DATA DESIGN AB

Company engineers are currently working on four different technologies:

- GPRS, WCDMA and Edge: This is the largest operation, occupying almost half of the employees.
- Mobitex: The second largest operation. Has financial responsibility for the system, from technological development to marketing and sales.
- W-LAN: The company has technical coordinating responsibility for the development of Ericsson's next-generation wireless high-speed LAN, HiperLAN.
- RXI 820: Real-time router that will be used in Ericsson's network for next-generation mobile systems. Based on Cello technology. The company is responsible for the technology solution.

Stock trading on the Net in Korea

The Mobitex Operators Association (MOA) recently held its largest-ever meeting in Gothenburg, Sweden. The meeting, attended by 130 delegates, affirmed that Mobitex is taking the lead in the development of the mobile Internet.

➤ At the MOA meeting, Ericsson also announced that a new family of Mobitex products for the 800 MHz band will be added to existing product ranges.

"Mobitex already offers many of the mobile Internet services that have been promised in the next generation of networks," according to several speakers, including Torbjörn Nilsson, Ericsson senior Vice President for marketing and strategic business development.

Ericsson Mobile Data Design in Gothenburg served as host for the MOA meeting. Among the highlights of the gathering were presentations of the new services being offered by the Korean Mobitex operator Intec Telecom, and the unveiling of the TWM III interactive messaging device by its parent company CNI. Smaller, sleeker and arguably as versatile as the Palm VII Connected Organizer, the TWM III has been specially designed to support not only the wireless e-mail and instant messaging services that Intec is now launching, but also a wireless stock trading application that Intec is launching in cooperation with the Seoul Stock Market.

"There are about three million retail traders in Korea," notes Intec Telecom CEO Won Baek. "These traders already account for 70 percent of the market volume, and most of their trades are done over the Internet. Over the next two years, we expect to put 200,000 or more of them on Intec's Mobitex network."

The new base station and radio modem products are primarily intended for China and other countries where the 900 MHz band is not available or currently used by GSM systems. Three trial networks using the new 800 MHz equipment will be taken into operation in China early next year.

Another exciting announcement was the unveiling of the Palm V cradle, which is currently being launched in Australia and will soon be available in Europe.

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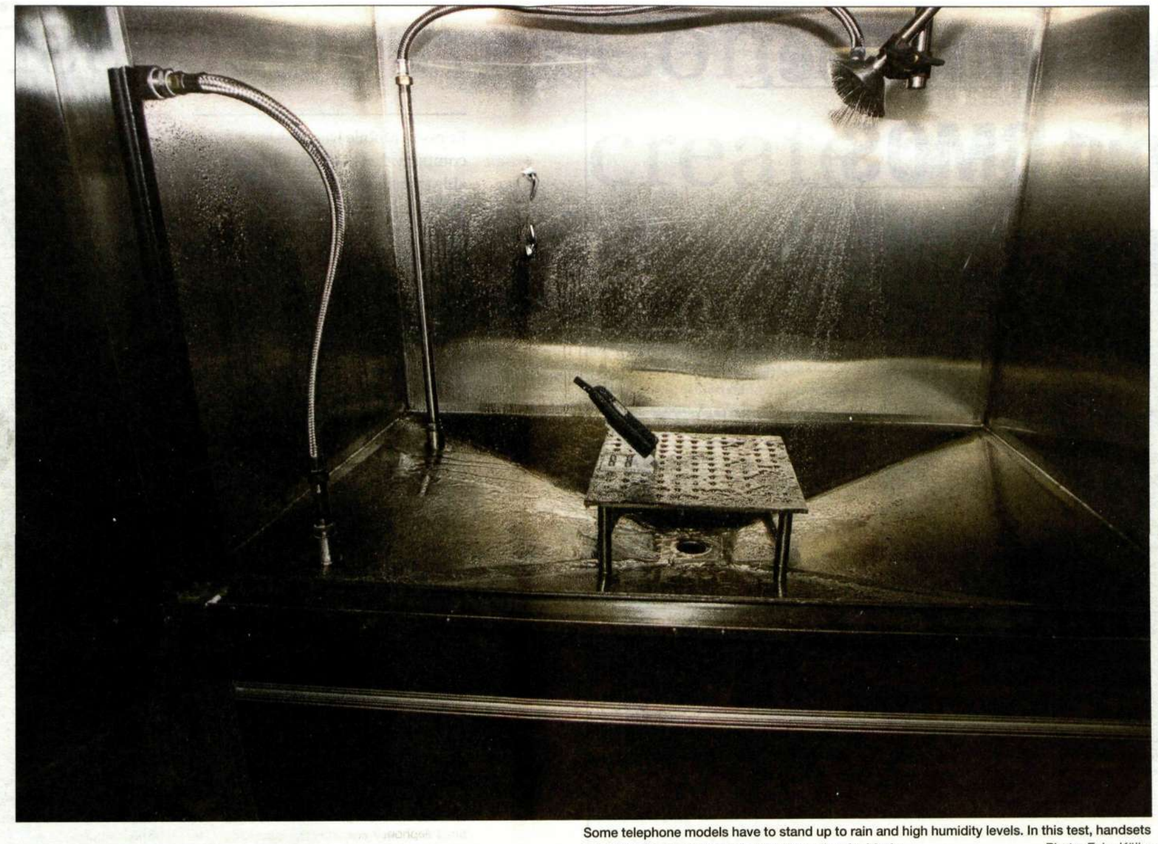
Won Baek, President of Intec Telecom in Korea, showing off the new wireless handheld, the TWM III.

Photo: Nils-Olof Sjödén

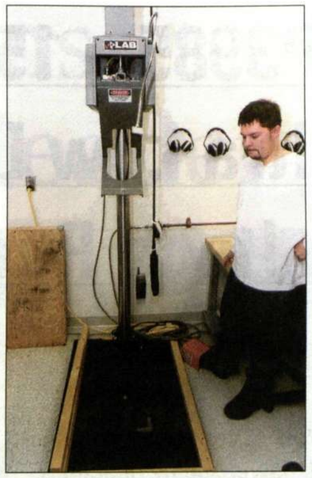
They are squashed, scraped, dropped, drenched and X-rayed. Ericsson's mobile phones have to stand up to rough treatment by the most heavy-handed users imaginable.

This calls for continuous testing – for example at Ericsson's cellphone text center at Research Triangle Park in the United States.

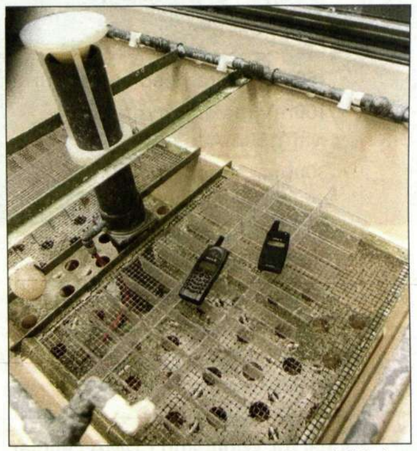
In the hands of a real roughneck



Some telephone models have to stand up to rain and high humidity levels. In this test, handsets are subjected to spraying to simulate a steady drizzle. Photo: Ecke Küller



A telephone must continue to function after being dropped on the floor. The machine simulates this type of accident for various types of floor surface. This was the first type of test conducted at Research Triangle Park, and it is still the most important, says Jimmy Schiltz.



Resistance to salt water is an important factor for people living in coastal areas. In this test, phones are subjected to salt-water vapor for several hours.

➤ Ericsson's US research and development center for the TDMA and CDMA cellphone standards is located at Research Triangle Park in North Carolina. It also has a test laboratory for mobile phones, full of ingenious devices, including robot-like machines which can perform complex movement patterns.

Jimmy Schiltz, a mechanical development engineer at Ericsson's Research Triangle facility, showed Contact round and explained how the various machines work. He designed and built one of them himself.

In addition to precision lab testing, Jimmy and his colleagues also conduct some experiments of their own – at a less scientific level – to see what the handsets can stand.

"We drop phones from balconies, drive over them with a car, and throw them out of the car window at high speed. It's fascinating to see how much punishment they can take," Jimmy says.

The various tests have produced results. When the lab testing started five years ago, 20 percent of the phones sold in the United States were returned to the dealer. The current figure is only 4 percent.

In Sweden, there is a similar facility at Lund for testing GSM phones.

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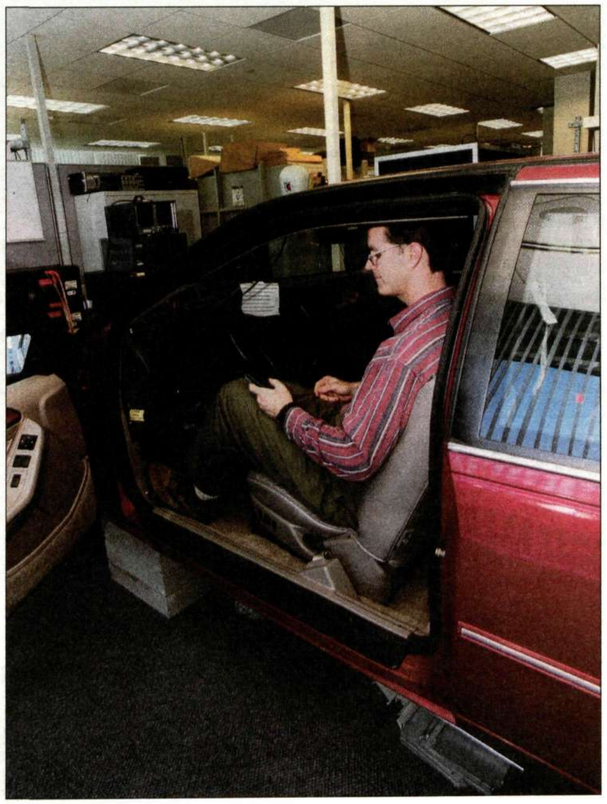
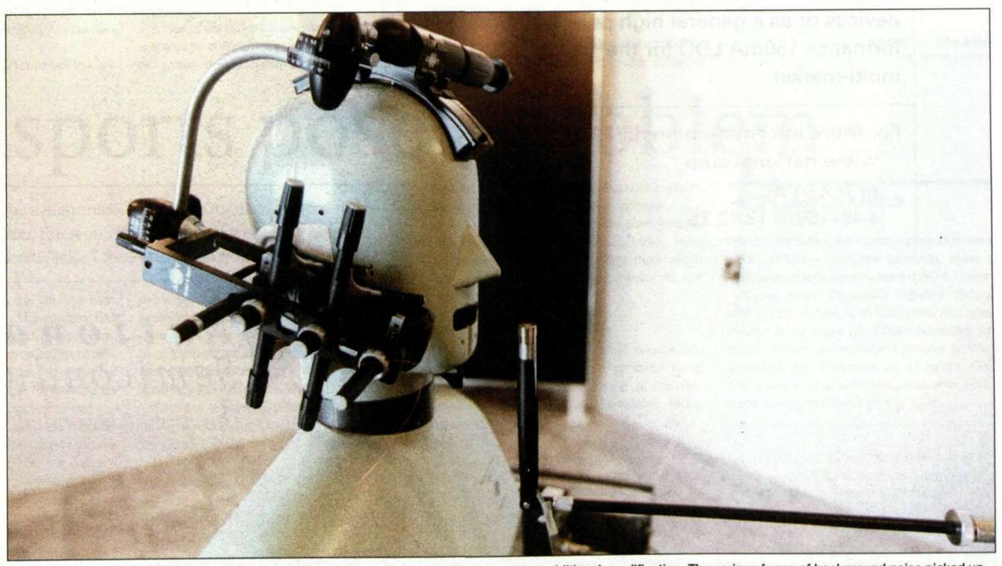


Speech audibility testing against a background of vehicle and traffic noise recorded in urban environments all over the world. Michael D. Townsend is at the controls.



The sound lab is equipped with a chamber in which extraneous sounds and noise receive additional amplification. The various forms of background noise picked up by a telephone are then measured.

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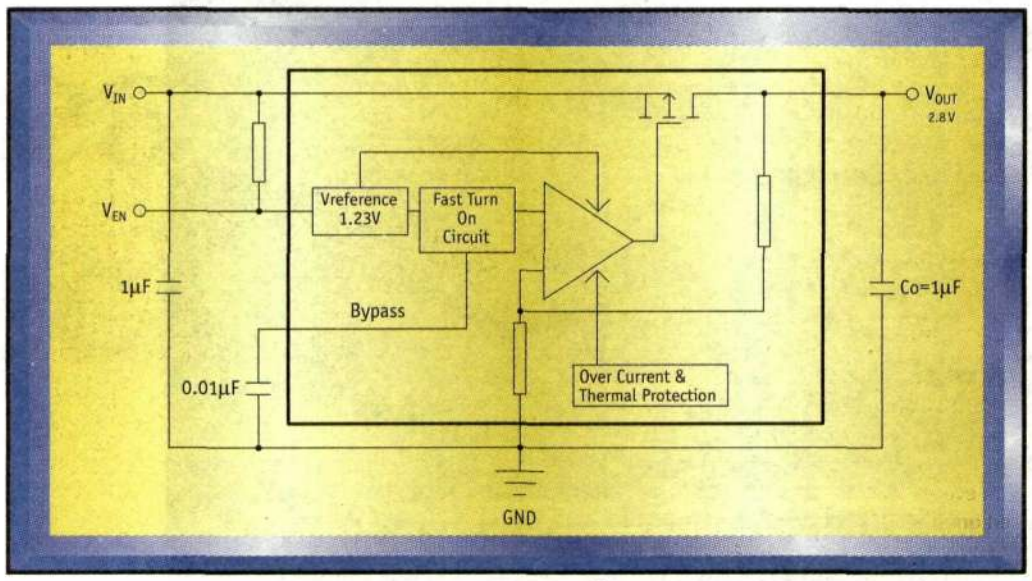

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National Semiconductor
The Sight & Sound of Information

Communications create a global leader

Ericsson in Brazil has one of the best electronic production plants in the world. Not only in comparison with other Ericsson plants, but also with the electronics industry in general.

The Brazilian plant in São José dos Campos is one of the most efficient and best-managed electronics production plants in the world.
Photo: Paulo Fridman

➤ An employee of Ericsson's mobile telephone production plant in Brazil recently found a way for the company to save money. The idea amounted to substantial savings in the range of SEK 230,000 a year.

In the past, a large number of LCD displays were broken when the telephones were assembled, and the employee's proposal was to attach the six assembly screws in a different sequence. The result was a sharp reduction in the number of broken LCD displays, which declined by 460 per month.

Visible communications

The value of the employee's idea was announced immediately and displayed clearly on the bulletin board situated next to the workplace.

Costs for every component used in the plant are posted on the bulletin board, which is one of the elements in a program to promote "visible communications." The program was started to provide all employees with access to information needed to achieve optimal on-the-job efficiency.

The communications program has created greater job motivation and a sharp increase in production efficiency.

Best in the world

According to a study conducted under the Probe program (Promoting Business Excellence) at the London Business School, the Brazilian plant is not only the best of all Ericsson production plants. It is also one of the most efficient and best-managed production facilities in the entire global electronics industry.

José Franchito, manager of the plant, offers one explanation for the Brazilian production unit's success.

"The most significant difference lies in how we communicate with our employees. And in our efforts to encourage them to become more involved. Overall skills and educational levels are also high."

The high level of training and education is a hallmark of the Brazilian plant, which is situated near São José dos Campos, an area in which local residents are known to be among the most well-educated people in all of Brazil.

All employees of the plant have the equivalent of a high-school education and 11 percent have augmented their basic skills through various technical training courses, while another 11 percent have college or university degrees.

A tour of the factory shows many signs of the employees' commitment to improvements in the production process. The bulletin boards announce news and information about the latest ideas and changes.

The information includes graphic descriptions of the various production processes, workplace designs and layouts, and the current status of every single machine and work station in the plant.

Dedicated mentors

Another bulletin board with results of the latest workgroup meeting at the plant is situated next to a conference table at one end of the assembly hall. Workgroup meetings are held between management personnel and representatives of the employees immediately before the start of every shift.

Assignments as employee representatives at the meetings are rotated between different members of each shift crew. One of the most successful innovations at the plant is the mentor program.

Hamilton Freitas

"It is the mentors who make this plant function as well as it does," says Hamilton Freitas, production manager.

"The mentors are proud of their role, and they realize the importance of their work in terms of encouraging our employees to work more effectively and with greater motivation," says Hamilton Freitas.

Jonathan Wheatley
freelance journalist

Transports pose a problem

In Brazil, logistics can be a nightmare. In order to manage and maintain control over the situation, Ericsson's logistics division not only needs to operate efficiently. It needs "jeito," the Portuguese word for skill.

➤ Brazil is the same size as the US, but with much more difficult terrain. The country has just about everything, high mountains, rivers, primitive roadways and chaotic traffic conditions in its major cities. It is not unusual for motorists to get stuck in traffic for 8–16 hours in São Paulo during the monsoon season.

"Our delivery reliability is close to 100 percent in relation to agreements we have reached with the sales department concerning delivery times," says Ricardo Hamad, Ericsson's senior planning manager in São José dos Campos, which is situated 70 km from São Paulo.

Structural problems

The obstacles, however, are enormous. The metropolis of São Paulo has 17 million residents, restrictions on trucks, and serious traffic problems. São Paulo's airport, Cumbica Guarulhos, was designed to accommodate a maximum of 5 million travelers a year and is literally bursting with today's traffic, which totals about 15 million travelers annually.

Ericsson selected São José dos Campos because of its strategic location adjacent to the Dutra motorway, which runs between Rio de Janeiro and São Paulo. The plant in São José dos Campos has 1,680 employees, including 220 persons working in the logistics division. Logistics delivers products to the rest of Brazil, but also to Ericsson plants in other countries. In its attempts to overcome some of these problems, Ericsson has started using the customs office at the Viracopos airport in Campinas, which has expanded its logistics capacity more than most other Brazilian airports.

A technology gap separates southeastern Brazil, with its large high-tech cities, from other parts of the country, large areas which are covered by dense rain forests in the Amazons.

Double demands

"The logistical challenge in Brazil is considerable. We have to deliver our products to all parts of the country, and we use all available modes of transport – trucks, airplanes, boats, trains, depending on what's available, the required delivery times and projected costs," says Ricardo Hamad.

Employees of the logistics division also have to deal with demands imposed by local legislation, an area characterized by particular complexities.

"We have to consider a broad range of different taxes, and delivery documents required by law are much more complicated than corresponding waybills and documents in other parts of the world," says Ricardo Hamad.

"Our most important objective today is to introduce the TTC-perspective (Time-to-Customer), and that represents what is truly a major challenge," he says in closing.

Jonathan Wheatley

FACTS/DELIVERIES

Ericsson manufactures its entire product range in Brazil, including consumer products. Sales in 1999 amounted to approximately USD 1.7 billion.

During 1999, Ericsson's logistics division spent USD 13 million on transports and completed an average of 7,000 deliveries per month: 90 percent via truck, 1 percent via truck and boat, and 9 percent via air freight. Only 0.02 percent of all deliveries were affected by some form of problems during 1999.

Wireless pioneers

HiperLAN2, the newest standard for wireless LAN, offers wireless transmission speeds of up to 54 Mbps, guarantees Quality of Service (QoS) and provides full compatibility with third-generation (3G) mobile networks. Ericsson is one of the strongest forces behind HiperLAN2, and is now the first company in the world to successfully demonstrate a functional product prototype.

Peter Toivola, project manager of WLAN radio access, and radio performance verification engineers Lars Carlén and Per Hellsten, inspect the access node.

Photo: Anna Rehnberg/Kamerareportage

➤ The prototype is based on a chipset with ASICs designed and developed by Ericsson. These chips include all functionality supported by HiperLAN2, plus a radio that covers the entire 5 GHz frequency range, on which the new standard operates. Highly sophisticated engineering expertise lies behind Ericsson's successful development of the new circuits.

"In terms of technology, it has been a tremendous challenge. The standard is highly sophisticated and the air interface is completely new. We are proud to have developed a small, energy-efficient and cost-effective product prototype that is totally functional under real production conditions. We are not quite at our goal in terms of performance, but we are convinced this technology will meet all requirements," says Ulf Hansson, section manager of systems design within Ericsson Mobile Data Design.

A key technology in the future

Ericsson Mobile Data Design and Ericsson Microwave Systems were responsible for major contributions to the development work, which also involved Ericsson Radio Systems, Ericsson Eurolab Nuremberg and Ericsson Enterprise, which has overall responsibility for Ericsson's WirelessLAN products.

"We believe HiperLAN2 will become much more than a standard for wireless Ethernet. This is one of the key technologies that will provide personal broadband communications everywhere, the wireless mobile Internet. It is highly compatible in all three fields of enterprise communications, public services and consumer products," says Per Wiklund, marketing manager for HiperLAN2 products at the WLAN Systems unit of Ericsson Enterprise.

The extremely high transmission speeds up to 54 Mbps will pave the way for a broad spectrum of applications. HiperLAN2 also provides unique support for guaranteed Quality of Service. The radio resources can be divided between different types of traffic, supporting optimal transmission conditions regardless of traffic type.

The key to this feature is the standard's centralized network structure, which makes it possible, if necessary, for a base station to reserve certain channels to and from a terminal for critical real-time transmissions, for example.

HiperLAN2, accordingly, is particularly suitable for such services as video streaming and other multimedia applications. The protocol also includes built-in security that manages both encryption and authentication.

HiperLAN2 is also equipped to handle Dynamic Frequency Selection (DFS), or automatic cell planning – a form of radio plug-and-play. All radio transmission standards are restricted by the limited number of available frequencies and, consequently, transmission channels.

An infinite number of users simply cannot share the same space. That's why mobile networks are built in cells, with frequencies that are reused in accordance with patterns whereby signals on the same frequency are planned at adequate distances to prevent disturbances. HiperLAN2 automatically plans how frequencies should be allocated. As a result, it is extremely simple, fast and cost-effective to place a HiperLAN2 network in operation.

Complements 3G

In addition to Ethernet, HiperLAN2 is also compatible with a number of other network standards, including PPP, 3G and Firewire. Because of its "seamless roaming" capability, which provides interoperability with different networks and exchanges in transmission methods, users never even notice the changes.

"The capacity to integrate with other network standards, combined with automatic cell planning, will almost certainly make HiperLAN2 a highly valuable complement in the expansion of third-generation mobile networks," says Per Wiklund.

Examples of public or semi-public applications areas include "hot spots" such as airports, universities and corporate villages – areas where large numbers of mobile users need to access the network for capacity-demanding services. A local HiperLAN2 network is equipped to meet the need for extra bandwidth in these hot spots because it can interoperate with 3G-networks offering greater geographic coverage.

For enterprise communications, HiperLAN2 can be used to build completely wireless WLANs, or to expand existing fixed networks.

Wireless networks are more expensive to build, but the investment pays for itself as early as the second reconfiguration, since no cables will have to be redrawn. In new construction projects, wireless LAN based on HiperLAN2 will become a competitive first-hand alternative, which also holds true for broadband networks in new residential properties.

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Researchers focus on family

Using smart communication, the parents of ten-year old Lisa can follow her when she leaves home and goes to school. The father in the family can also see that his wife is at work, the dog is at home and that the front door is locked.

Intelligent communication within the family is demonstrated by lab manager Lori Robertson, Markus Bylund from the research partner SICS, and project manager Jan Gabrielsson.

Photo: Anders Anjou

➤ This is the vision that a few researchers at the Wireless Applications Research Lab (WARPLab) at Ericsson Research in Kista paint for the future of family communications. The project, known as FamilyLink, is an attempt to utilize the always-on infrastructure of the mobile Internet to study ways of strengthening group cohesion within a target group such as a family.

A family is a group that displays many interesting characteristics. Everyone knows each other, members share common space and interests, they share common values, and they might have a shared home network that operates using Bluetooth. Within a family there are strong social ties, a fair amount of small talk, reminders and controls to ensure that everything is alright.

Communications within a family unit are typical of the world towards which we are headed. It consists of a flood of information, numerous terminals that all network with each other, a mixture of voice and short, written text messages and information from both internal and external sources.

"The solution that we have come up with is very general and can be adapted to any group of individuals," says Ericsson's research manager, Håkan Eriksson.

"What's interesting is the network architecture and how one creates a good service structure. As well as ensuring that services are simple and easy to use."

A year of research

"We've been working for a whole year now together with the Swedish Institute of Computer Science (SICS), and have come up with a theoretical solution for how to tie together environments and users in an intelligent manner," says project manager Jan Gabrielsson and lab manager Lori Robertson. "We've incorporated both user and integrity aspects into the technology, but we have not yet evaluated the results together with outside users. That will come during the next phase of the project."

The solution demonstrated internally at the end of December is based on social computing, where users leave traces behind them, creating group consciousness. A common view of a family is created, while every member has their own profile that is updated more or less automatically depending on how the member's situation changes.

The interface is an integral part, serving as the window to the user. The principle behind the mobile Internet is that one is always reachable from various mobile terminals, regardless of the terminals' performance in terms of memory, display or sound. Since the people who develop applications should not have to know in advance what sort of interface users have, an interactive solution based on modules for every kind of interface, has been created.

Services via broadband

The main sponsors for this research project are Björn Krylander at Ericsson's Home Communications unit and Mats Palerius, head of Residential E-services, within Ericsson Business Innovations.

"Our job is to develop electronic services for home users, services that we offer through mobile or broadband operators. We have already sold our first solutions and would now like to develop our Broadband to the Home and Mobile Internet concept, by supporting research into FamilyLink," says Mats Palerius.

"We're sponsoring the project on an annual basis, but plan to continue to make improvements to our business concept as advances are made within the project."

Major work regarding services in the home is currently underway within the Open Service Gateway Initiative (OSGI) standardization body. OSGI has more than 80 major members and Ericsson has been one of the driving forces behind it.

Lars Cederquist
lars.cederquist@lme.ericsson.se

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Illustration: Helena Halvarsson

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In the near future, you will be able to use a single training organization to develop your knowledge and skills by contacting the Ericsson University.

➤ The Ericsson University will have 103,000 students in 140 countries when Ericsson concentrates all of its training programs in a global institution, which will have total responsibility for all forms of learning activities throughout the company.

"Our goal is to develop and supply the best and most up-to-date research findings, skills and networks for Ericsson employees and others who contribute to our success. We want to build up the most exciting training programs, based on the depth of our own knowledge and contacts with the best universities in the world," says Per-Olof Nyquist, who is director of the Ericsson University.


Per-Olof Nyquist

"The Ericsson University will be the hub of a network which includes the foremost universities, management schools and management consultants in the world. We already have a broad range of contacts – and the Ericsson University will give us a platform that will enable us to handle them."

Coordinating diversity

Ericsson already has extensive training operations, but so far they have been relatively uncoordinated.

Nine units have been responsible for training operations in Sweden alone, not to mention the corresponding activities in subsidiaries in other countries.

In practice, this has made it virtually impossible to have an overview of the courses offered, and access to courses has depended on the employee's location in the company.

High ambitions

The Ericsson University will rectify this situation, and the new organization has ambitious goals.

"When we started to examine this question, we were only thinking about courses and training programs. But now we have extended our scope to include all types of learning," says Birgitta Landin, project manager of the study that laid the foundations for the decision to establish the University. "This involves sharing experience and know-how while setting up networks. The Ericsson University will also contribute to the cultural change process." Both the Swedish Association of Graduate Engineers (CF) and the Union of Clerical and Technical Employees (SIF) approve the new scheme.

"CF is in favor of coordination. It will be easier to find the right training program if you don't have to look outside Ericsson more than necessary," says Birgitta Albertsson, who represents CF.

"All forms of training have a positive impact on salary development," says Per Lindh, on behalf of SIF. "I hope the Ericsson University will permit more extensive customization of training packages if the programs are compiled and coordinated. A full presentation of courses and programs available to everyone at all levels will be a positive factor."

The new Ericsson University was inaugurated in the New Year, and the first task has been building up operations.

Common processes and methods

"The existing structure will continue to apply for most operations during January and February. We have to keep our existing promises to customers. The new organization will be in place by March 1, with all the vacancies filled," Per-Olof Nyquist says.

The Ericsson University will be based on a platform which is both physical and virtual. This means that teachers and instructors will not necessarily be Ericsson employees, but that common processes and methods will be employed throughout all corporate training.

The initial interface for the University will be a Web portal, but the courses offered will extend beyond the Internet to center on a number of campuses in Sweden and other countries.

Greater influence

One of the aims of the Ericsson University is to present training program opportunities in a clearer form in order to make it easier for employees to take responsibility for their own skills development.

"At present, the main responsibility for skills development lies with the individual employee. But it may be difficult for people to realize that their jobs may disappear within a year or two. Senior and middle management must clarify their views on future developments and needs – the new University has an important function to fulfill in this process," Birgitta Albertsson says.

The idea of establishing an Ericsson University has been discussed for some time. The first time it was put into practice was when Mats Dahlin established the Strategic Training program for the network operators segment last year.

Strategy links

The concept proved successful, and Britt Reigo, senior vice president, People and Culture, set up a project to consider the possibility of having a university for the entire company.

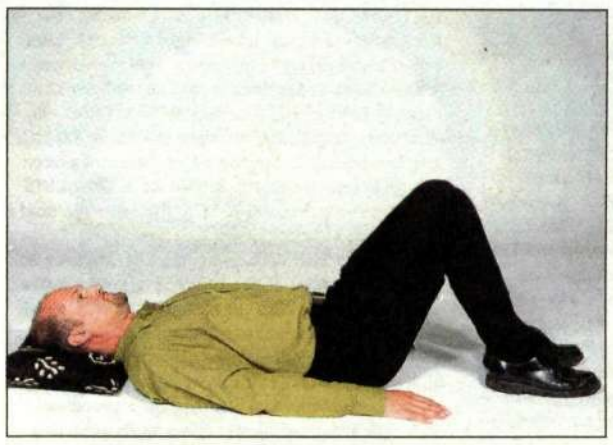
"The Ericsson University must have close links with company strategies," Britt Reigo says. "The University must be at the leading edge, disseminating the knowledge required to make the company's strategies feasible."

"Skills development is a key issue for Ericsson. Obviously, this involves more than training programs, since what we learn in everyday working situations is at least as important," Per-Olof Nyquist says.

Henrika Lavonius-Norén
freelance journalist

Hints for better backs

Do you have back trouble? Contact shows how to avoid problems by following an 18-point training program. The first article deals with back problems. Stiff necks will be covered in the next issue.



1. Start by lying on your back on the floor, with a cushion under your head. Photo: Bror Karlsson

➤ Desk jobs – or sitting at a workstation or workbench – combined with insufficient physical activity may lead to back problems and stiff necks. This has become a very common ailment, resulting in considerable suffering and absence from work for shorter or longer periods.

"Simple training programs can help to avoid many of the problems. Physical activity is usually better than resting," says Pirjo Löfmark, who is an ergonomist. She has drawn up the Contact training program.

Several studies indicate that half an hour's active physical exercise three times a week helps to keep your back in shape.

"You can supplement whatever form of regular exercise you choose by doing back exercises. You should probably do them every day if you have a tired, stiff back," says Annelie Andersson, who has been a gymnastics instructor with the Friskis and Svettis organization for many years, and specializes in training instructors for special back-gymnastics programs.

Physical training also increases your general sense of well-being and improves your temper.

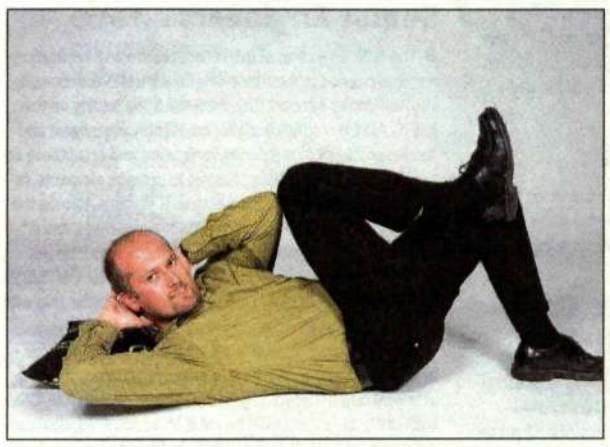
Björn Ternström, our model, is a graduate engineer and product manager at Ericsson in Kista. He has recently returned to Stockholm after working as a local product manager for TDMA in Dallas.

"I had problems with my back, shoulders and neck in the spring as a result of too much desk-bound work," Björn says. "I went to a chiropractor, but it didn't help. I started to cycle and play indoor bandy – which is like ice hockey without ice. That was a little better, but I really need to find a program to make me more supple."

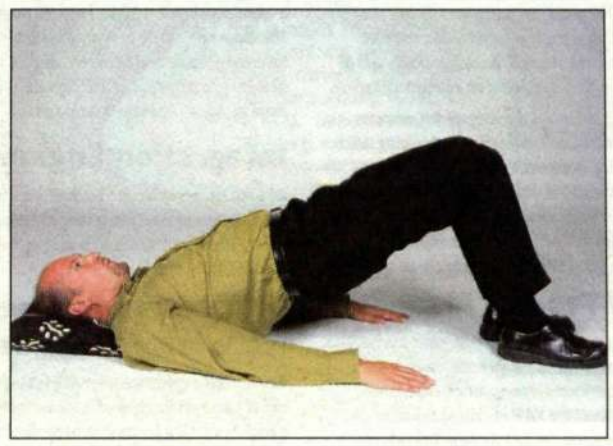
All the back exercises should be performed slowly and gently. Each exercise needs to be repeated 10 or 15 times.

"Good luck with your back exercises," says Pirjo Löfmark.

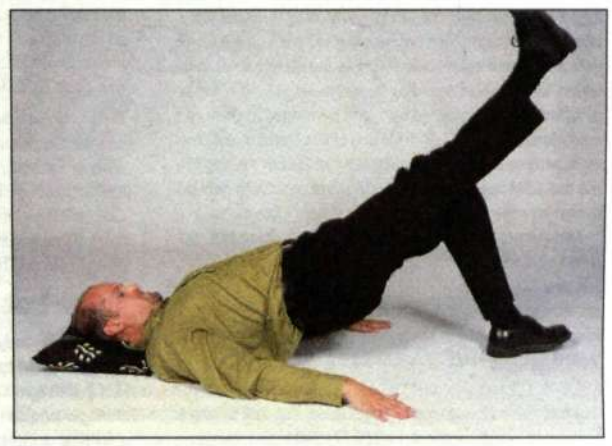
Cecilia Sandahl
freelance journalist



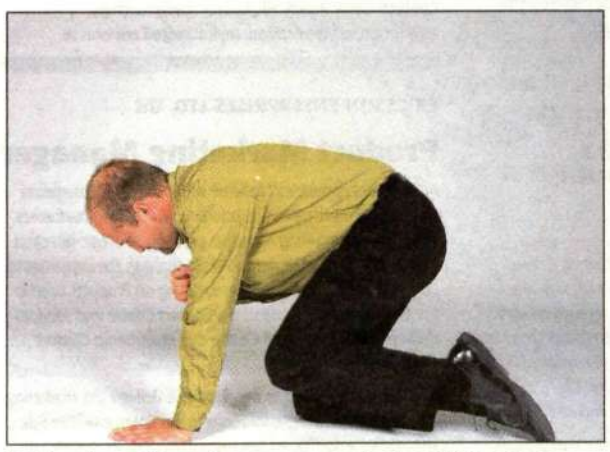
2. Clasp your hands against your head and press the small of your back to the floor. Lift an elbow and draw your opposite knee towards it. Repeat this movement on the other side of your body.



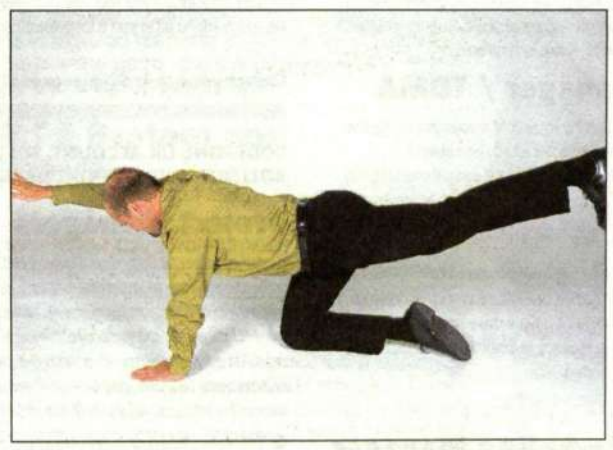
3. Lie on your back and bend your legs upwards, keeping your arms on the floor. Press your buttocks together and lift them off the floor. Lower your buttocks to the floor. Repeat.



4. Lie on your back with your legs drawn up. Raise your buttocks, stretching out one leg at the same time. Your knees should be parallel and your hips horizontal. Raise one foot and then lower it. Repeat with the other leg.

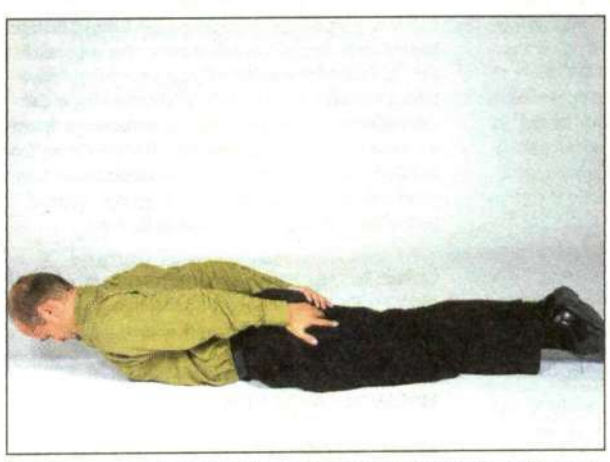


5. Stand on all fours. Compress your body and move one elbow towards the opposite knee.

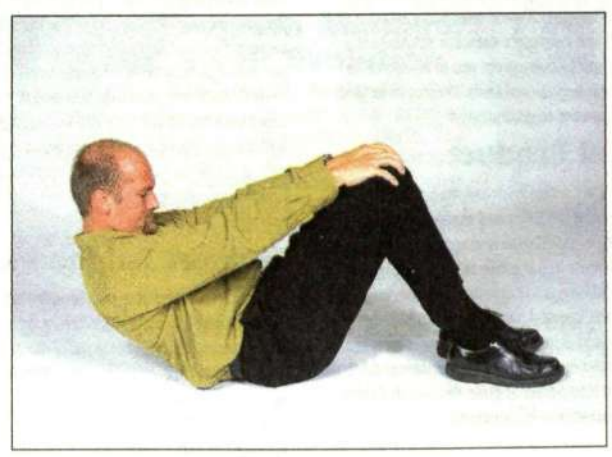


6. Then stretch out your body in a straight line. Turn one foot down, with your face to the floor. Repeat with the other arm and leg.

7. Stand on all fours. Raise alternate elbows towards the ceiling.



8. Lie on your stomach with your arms at your side, with your face to the floor. Pat yourself on the buttocks while raising your chest from the floor. Repeat.



9. Lie on your back and raise your legs. Stretch out your arms towards your knees. Pull in your chin and pull yourself up gently. Lie back again and repeat.

10. Complete the program with a stretching exercise, face down. Let your body drop to the floor, push your buttocks backwards, stretching out your heels and arms.

vacancies AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation.

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

Contact No. 1 2001 **Updated January 12**

MU CARIBBEAN, PUERTO RICO

Radio Network Design & Performance Improvement Engineer GSM/TDMA

The MU Caribbean is responsable for marketing and deliveries of Ericsson products in the Caribbean Region covering an area of 230,000 squares kilometers and with a population of 27 million people. Activities are carried out from offices in Puerto Rico, Dominican Republic, Jamaica and Curacao.

● We are looking for a Radio Network Design and Performance Improvement Engineer to help us in the fast growing business in the Caribbean and expand our current group of three engineers. We are experiencing significant growth in GSM networks in the region and need to care of this business.

The candidate will be working with both design of new cellular systems, especially GSM, and optimisation of existing systems. The work will be performed in close cooperation with the RF Engineers from the operators. Most of the work will take place in Puerto Rico but traveling will be required for both design and optimisation work to the other islands in the region. Sale support regarding new systems as well as for expansions will be requested from and performed in close cooperation with local KAM, NAM and LPM's. Perform radio network performance improvement services for our existing TDMA and GSM operators. Support the customers with network design for new systems and existing system expansions.

Minimum 2 years experience within cellplanning and optimisation, preferably from GSM systems. Experience of Ericsson planning tools (EET/TCP). Knowledge about AXE statistical measurements and post processing tools. CMOS/OSS experience, especially Performance Management. Experience of drive-testing using TEMS tools. Consultant minded.

Contact: Stefan Ljungberg, Manager Radio Network Desing & Performance Improvement, +1 787 771 1700

RBS IE Engineer

Radio Base Station Installation Engineering Engineer to work with TDMA and GSM systems.

● The candidate will be a team leader that provides guidance and directions, drives improvement changes and the quality assurance for the following areas: Radio Site Investigation. Radio Site Design documentation (C-module). Preparation of drawings in CAD. Design of new project specific material. Investigate and solve engineering related problems. The work should be performed in accordance with Ericsson methods, quality and safety standards.

Requirements: A degree in Electrical/Electronics engineering or similar education. Broad experience from RBS Installation Engineering within Ericsson. CAD competence and strong knowledge of computer programs. Leadership skills. Independent, self-motivated and well organized with analytical mind. Cultural awareness. Ability to work independently as well as in a team. Self-starter and result oriented with strong interaction skills. Fully bilingual (English & Spanish).

The candidate will be based in Puerto Rico but will need to travel to other countries in the Caribbean such as Jamaica, Dominican Republic and Curacao.

Contact: Jan-Urban Johansson, Impl.Mgr +1 787 771 1700.

GSM Local Product Manager

The telecom market is growing strongly with hard competition between operators. Several large global operators are present in the region. We are now looking for an experienced manager who can support the NAM in driving the sales and marketing activities; provide product strategic information and system proposals to offerings to assigned clients in our office at San Juan, Puerto Rico.

● The candidate should have a good technical knowledge of GSM / CDMA cellular systems with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit. As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Fluency in English is essential. Spanish knowledge is a plus. Ericsson experience is requested.

Contact: Espen Myhre, NAM, +1 787 771-1700.

MU CARIBBEAN - JAMAICA

Sales Manager

The telecom markets in the area is in the process of deregulation with a number of possibilities within mainly cellular and datacom networks. We are now looking for an experienced marketeer who can identify and initiate new business that supports strategic sales directions. The position is located in San Juan, Puerto Rico but frequent travelling in the Caribbean is required.

● The candidate shall have a M.Sc or MBA degree and broad professional experience of international sales & marketing of TDMA, CDMA and/or GSM with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit.

As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Ericsson experience is requested. As the area is multicultural, fluency in English is essential and knowledge in Spanish / French is a further merit.

Contact: Espen Myhre, NAM, +1 787 771 1700.

Local Support Engineer

We have an interesting challenge for you within our new GSM contract in Jamaica. The main responsibilities for this position will be to provide technical support for resolving complex problems at highest technical level. The responsibility will also include TR/CSR handling and being on emergency service.

● The competene requirements are: Degree in Computer Science, Electronics or Telecommunication Engineering. Minimum of 5 years working experience on AXE (mainly BSC). RBS 2000 of which at least 3-4 years experience should be on CME20 BSS systems in verification and/or support environment. Some knowledge in WAP and GPRS is desirable. Candidate should also have good English communication skills,

GSM Local Product Manager

The telecom market is growing strongly with hard competition between operators. Several large global operators are present in the region. We are now looking for an experienced manager who can support the KAM in driving the sales and marketing activities; provide product strategic information and system proposals to offerings to assigned clients in our office at Kingston, Jamaica.

● The candidate should have a good technical knowledge of cellular systems with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit. As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Fluency in English is essential. Ericsson experience is requested.

Project Manager / TDMA

● We are now looking for a Project Manager to handle the rapid expansion of our customer's cellular network in Kingston, Jamaica. The Project Manager should manage the implementation projects contract to customer acceptance in accordance with project time schedule, budget and quality requirements.

The candidate should have several years of experience of managing implementation of cellular networks. As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Fluency in English is essential. Ericsson experience is requested.

GSM Sales & Marketing Manager

● We are now looking for an experienced manager who can support the KAM in driving the sales and marketing activities; provide product strategic information and system proposals to offerings to assigned clients in our office at Kingston, Jamaica.

The candidate should have a good technical knowledge of cellular systems with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit. As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Fluency in English is essential. Ericsson experience is requested.

TDMA Local Product

● We are now looking for an experienced manager who can support the KAM in driving the sales and marketing activities; provide product strategic information and system proposals to offerings to assigned clients in our office at Kingston, Jamaica.

The candidate should have a good technical knowledge of cellular systems with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit. As for your personality, we expect you to have a drive for result and excellent interpersonal skills. Fluency in English is essential. Ericsson experience is requested.

Contact: Ake Ohnback, KAM, +1 876 754 8659. **Application**: Noelia Borrego, HR Repr., noelia.borrego@ericsson.com.

NIPPON ERICSSON K.K. – JAPAN,

3rd Generation, WCDMA/IMT-2000. Japan has today over 55 million cellular subscribers and Japan is the first market to launch 3G (WCDMA/IMT2000) in the world. J-Phone will launch 3G services in October 2001. The J-Phone network will consist of parts from different vendors, as Core Network and Radio Access Network from Ericsson, Core Network and Radio Access Network from other vendors. Ericsson is the single vendor for coverage of major cities in Japan and at a later stage the system will become multi vendor in the remaining areas. In order to meet the challenges presented by the deployment of a 3rd Generation WCDMA/IMT-2000 Network in Japan the Multi Vendor Integration unit (NRJ/ST/W) within Nippon Ericsson is looking for a number of motivated and experienced engineers.

For all positions, knowledge and experience from TR handling, correction testing and knowledge of MHS/MSS is required. In addition experience from IMT-2000 testing is a bonus. Another requirement is to be able to work well within a team environment and be able to work in a new culture. The main role will be to verify the standard protocol between different vendors and between network elements. For further details regarding Nippon Ericsson K.K please visit the web page at: http://inside.jp.ao.ericsson.se/

Integration Engineer

● Core Network Circuit Switched. Previous experience from AXE testing, upgrade and testing of SW packages is required. Experience from CN1.0 and having an overall knowledge of WCDMA/IMT-2000 is a plus.

Integration Engineer, Core Network Packet Switched

● Previous experience from AXE testing, upgrade and testing of SW packages is required. Experience from GPRS based packed switching function in network as well as ATM/IP protocols and having an overall knowledge of WCDMA/IMT-2000.

Integration Engineer RAN, Radio Access Network

● Experience from RNC-Core network integration. Testing of Iu (Iur) interface. If you feel you can meet the requirements, we are ready to offer you a long-term contract.

Contact: john.fornehed@-nrj.ericsson.se, +81 45 475 5841.

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 Manager 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. 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 Engineers

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 Troubleshooters 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. 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

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

● 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

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 Advisor: cathy.roach@-etl.ericsson.se. **Application:** myfuture@etl.ericsson.se

ERICSSON ENTERPRISES LTD, UK

Product Marketing Manager

An excellent opportunity to work within Ericsson Enterprises Limited as part of a team supporting our existing customers. The Product Marketing Manager provides strategic direction for the products on his/her portfolio through the implementation of marketing programmes focusing on Products used in the Call Centre and Multimedia Contact Centre and services delivered to Ericsson Call Centre and Multimedia Contact Centre users.

● The Product Manager develops and delivers the marketing messages to take these solutions to the Enterprise. The role will involve a number of key responsibilities. To identify and examine new business opportunities, products and services. Analyse their business potential and make recommendations to address or not address. The role will consist of devising marketing programmes to address opportunities within respective sectors and supporting the Marketing Department. You will need to Market and manage products according to their fiscal performance, respective market demand, strategic importance and position as well as many other responsibilities. The successful candidate will have a number of competencies. You will need to have a clear understanding of Call Centre/Contact Centre operational and management dynamics. A minimum of 2 years experience within Call Centre/Contact Centre technology. Strong presentation experience to internal and external audiences and a proven track record of leading and operating within multidiscipline teams.

Contact: Recr. Mgr, Joanne.James@etl.ericcsson.se, +44 1444 256019 or HR, Lynsey.Goldring@etl.ericsson.se, +44 1444 234547, Telecommunications Centre, Burgess Hill.

ERICSSON CANADA INC.

AXE Support/Troubleshooter

● required to join our team of Product Support Specialist. We have several positions open for support specialist at all levels

Guido, Project Manager and Taner, GPRS Tester, having a chat in the mobile internet.

Ericsson Eurolab in Herzogenrath/Aachen, Germany, is a dynamic international Research & Development center, located in the heart of Western Europe. We are responsible for development and integration of 3G Core Network, including the management of international operations of Core Product Unit Switching Products. This includes Product Management, Systems Management, Project Management and Performance Management (Processes, Methods, Tools and Quality). Close to 1000 employees from more than 50 nations are working on all phases of the product life cycle, from Research and Systems Design to Supply and Third Level Support. And we are facing some further growth.

System Designers & Senior System Designers, GSM and UMTS/3G

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; Core Network related Standardization; Operation & Maintenance; Hardware Platform Management and GSM/UMTS Product Market Support.

As we are looking forward to strengthen our system management organization 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. Suitable candidates possess an engineering degree (e.g. telecommunications, electrical engineering or software engineering) with a minimum of 3 years experience in design, system level development or research. Good verbal and written communication skills, a high level of personal initiative and the ability to work autonomously are essential for these positions. Knowledge of mobile communications or IP & datacom networks is an advantage.

Software Design Engineers

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 environment. You would be part of a fast moving team developing a new system, which migrates towards a successful future proof development product. A key product for Ericsson for it's market positioning.

For this reason we are looking for a number of experienced software design engineers who want to play a leading role in the evolution of Ericsson´s AXE systems. 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 working knowledge of structural design methods is required for these positions. To be successful you need to have very good communication skills, quality orientated, innovative and a strong team player.

GSM SS/UMTS System and Network Testers

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 and GPRS nodes; 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), charging or #7 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, openness, respect, initiative and reliability to work as an effective member in our project teams.

Product Managers/Program Manager for GSM, UMTS and 3G IP Evolution

Strategic product management for GSM, UMTS, Application Core and 3G IP Evolution is done in co-operation with local product managers, core network product managers and system experts. The focus is on the business and product aspects and our tasks include business planning, business cases, pricing, standardization strategies, product roadmap & plans, release responsibilities, product packaging, requirement coordination between different applications, statements of direction, 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.

The **program manager** has an overall responsibility for the planning of 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 releases. The **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 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. We look primarily for experienced product or system managers who have a solid technical and business understanding of mobile solutions offered by Ericsson.

Process, Methods, Tools and Quality Management

The general focus in these positions is to take the responsibility for processes, methods, tools and quality in the the projects. The main authorities and tasks are: supply the projects with suitable methods and processes to enhance the system and software design process, initiate the use of improved and/or new methods and processes, take process and quality measurements, plan and perform project/process audits, monitor and evaluate methods and processes used in other organizations in order to identify potential process improvements, support the project office in all methods, process and quality related activities. Evaluation of new processes, methods and tools and initiating pilots are part of the role. You will coordinate the network with your counterparts in the various subprojects.

You have a background in management and/or project management in Ericsson operations and/or a strong background in software engineering. Also flexibility and willingness to change is a must. Background in managing improvement programs in development environments would be advantageous. Any previous experiences with methods, tools, processes, audits and project work is appreciated. Last but not least you should have a high interest in methods work and see this job as a challenge for you and the company. You will be able to set clear goals, define messages and strategies and see through the implementation of the strategic improvements.

Line Manager / Competence Manager

We are looking for enthusiastic and people oriented managers and colleagues, who will be responsible for 10 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.

The main tasks and activities are: Resource planning, project resource contracts, participation in assignment board and management team, performance management and development talks, recruitment, salary review & setting, team coaching, career development and planning, keep a thorough overview and understanding of all operations. You need to have an understanding of the impacts of future technologies for strategic competence planning etc. You should have the combination of strong operational orientation and a interest in human beings.

Project Manager

In this positions you manage key projects for 2G and 3G wireless systems and partly also for wireline systems. The projects we run are in pre- and feasibility-study, implementation, verification, global supply&support and total projects. They encompass subprojects in different continents. We require specialization in telecommunications or datacom technology. Some years work experience in technical aspects of telecommunication and proven experience in project management are required. Good knowledge of PROPS, project planning, budgeting and management methods are a necessary base. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is required. Furthermore you should have strong interest in people and be willing to develop as a leader. The main tasks are to lead a large telephone system project with full responsibility for fulfillment of Ericssons commitments to our customer.

For further information about our open positions please visit our homepage:
http://www.eed.ericsson.se

Please contact

Ericsson Eurolab
Deutschland GmbH
Herzogenrath/Aachen,
Germany
Human Resources
Christina Schneidawind
Dial +49 2407 575 7814
eMail:
Christina.Schneidawind@eed.ericsson.se

ERICSSON

in Customer Support Services based in Mississauga, Ontario, Canada. Our support team provides: Support for TDMA, GSM and GPRS. Assists in the recovery of emergency situations. Provides 1st line support 24 hours per day 7 days per week. Assists our customers with technical and operational questions. Resolves technical faults and customer complaints using advanced troubleshooting skills. Escalates and follows up with trouble reports to 2nd line support. Works to minimize trouble report turnaround times. Use support tools to accurately record trouble report progress. Implement and maintain software corrections on customer's equipment. Provide guidance and support to the customer regarding maintenance of their network equipment. Assist in the ongoing development of working processes and procedures.

Successful candidates will come from a support environment and ideally have either or both TDMA and GSM switch knowledge. Candidates will be willing to work on both systems and will be able to demonstrate a good working knowledge of Plex, ASA and good cellular network knowledge.

The skills we are looking for are: Strong support background, Familiar with working on live switches. Strong customer focus. Good communication skills. 2 – 3 year experience within TDMA or GSM. Good knowledge of Plex and ASA. Knowledge of Ericsson support tools and processes. Knowledge of Unix is desirable. Knowledge of DT is desirable. In response to this we will provide a challenging working environment at a fast pace and the opportunity to develop into new system and the new telecom world of GPRS and 3G.

Contact: Steve Whitten, Customer Support Services Manager, +1 905 206 6906, Steve.Whitten@ericsson.ca

ERICSSON MEXICO, CUSTOMER SUPPORT SERVICES MEXICO

Do You want to work with support for one of the fastest growing regions in the telecom world? Are You interested in the newest technology within the wireless area? Would You like to get a taste of the Latin American Culture and learn Spanish? Well, then You should consider joining our team! The Competence Center TDMA-2 is now looking for:

TDMA AP Trouble-shooters

● The TDMA AP system support organisation (a team of 3 apz egnineers and 4 AP engineers) in Mexico is urgently seeking (experienced) AP trouble-shooters in all areas of: APG30 and new platforms such as APG33 and APG40. Our unit is part of the Ericsson Global Services Division and provides 2nd line support services for a wide range of products for TDMA systems. These services are provided to regional 1st line support offices (Ericsson Local Support), in almost all the countries in Latin America. We provide 2nd line support to countries such as Mexico, Brasil, Argentina, Chile, Equador, El Salvador, Guatemala and others. We cooperate frequently with LMC-Canada since they are the Product owner, which means that they co-ordinate FOA's, SOA's and ACA's for our markets.

As part of our organisation, you will be providing Consultation, Trouble Report Handling and Emergency Handling services to our internal customers. We are called upon to resolve system outages and disturbances, specify and isolate hardware and software faults, issue Emergency solutions when required, and travel to site if necessary.

You are an ideal candidate if you have experience with the AP hardware and software used in, either design, testing or support environment. You possess good communications skills, both written and verbal. It is essential that the candidate is fluent in English. In addition you must be able provide knowledge transfer the local engineers. Both short term and long term contracts are available.

Contact: Henrik Aman, Team leader/APZ Expert TDMA-2 Mexico City, Henrik.Aman@am2.ericsson.se, +52 2169 2953

GLOBAL SERVICES, ERICSSON AUSTRALIA LTD

Customer Service Engineers

If you answer YES to the following questions you should consider this exciting opportunity: Do you want to work more with the customer?Do you want to be part of a global function hosted within EPA?Do you want to working in a dynamic and enthusiastic team?Do you want to help develop the operational processes and practices, which will impact the way we work?

● The Global Customer Service Office (GCSO) is seeking the services of Support Engineers for ongoing roles in a dynamic new team. The roles are to take on responsibility for Customer Support requests towards the Ericsson Global operators in various competency areas (see attributes) associated with the AXE platform in a growing market.

Key Skills: Provide Help Desk assistance to end and internal customers. Technical support on fixed network elements. On line support. Provide technical advice/solutions to customer. Perform correction handling activities. Ability to impart knowledge and experience to team members.

Attributes:Experience including:Technical understanding of the areas of AXE, PLEX, ISDN etc, Network Intelligence and Engine products, AXI, AXD and Tigris. Ability to interpret the customers needs/requirements and provide corrective solutions. Customer interface. Outage recovery. Trouble shooting. Flexibility to work in a team and under pressure. Service culture.

The successful applicants can expect challenging positions towards Ericsson growing Global Market. The positions are based in Melbourne (Broadmeadows).

Contact: Steve Cooper GCSO-AP hub manager, steve.cooper@ericsson.com.au, +613 9301 1587, ECN 880 1587. **Application latest 010201:** Hadjer, quote ref no. 011456.

COMPAÑIA ERICSSON ARGENTINA, ELS FIXED AND MOBILE NETWORKS

Experienced AXE troubleshooters. Our unit provides 1st line support for TDMA, Wireline and now GSM systems in Argentina.

AXE/IN Fixed Troubleshooter

● As part of the support group, you will be providing consultation, trouble report services and emergency handling services to our external and internal customers. We are called upon to specify and isolate hardware and software faults, issue emergency corrections when required, resolve system outages and disturbances. We also provide local software adaptations and participate in new features implementation.

You are an ideal candidate if you have experience with the APZ/APT hardware and software. You posses very good communication skills. Among your main tasks you will have to transfer your knowledge to other members in the team. You also have experience with tracing in live exchanges using Test System, as well as a good understanding of PLEX/HPLEX and ASA.

At least two years of experience with one or more of the following functional areas: Intelligent Network / SMAS. Engine. Signalling (R2, ISUP, CCS-7,ISDNE, V5.1, V5.2, INAP). Network Synchronization Principles. APZ (software and hardware problems in the CP/RP/EMRP). Centrex solutions (BGC).

Contact: patrick.demeester@cea.ericsson.se

AXE Mobile Troubleshooter GSM / TDMA

● At least two years of experience with one or more of the following functional areas: CME20 (GSM), BSC GPRS. CMS88 Call Delivery Principles (TCS-Traffic Control Subsystem, HLR/VLR-Home Location/Visitor Location Register).APZ (software and hardware problems in the CP/RP/EMRP). Network Synchronization Principles, Internode Signalling (R2, ISUP, Signalling system #7, ANSI-41,MAP). Test System.

Contact: nestor.ramirez@cea.ericsson.se

Mobile Troubleshooter / Radio

● At least 3 years of experience in one or more of the following areas: CME20 (GSM) Base Transceiver Station (all Types of RBS family) BSC, GPRS. CMS88 (TDMA) Base Stations (all types of RBS884, software and hardware in CP/EMRP/DP. Subsystem MBS, Subsystem MRS, RBS/BTS installation and integration, Traffic Principles (call setup, handoff etc), CMS88/CME20 Statistical Programs (CTS, MDATA, etc).

Contact: martin.krinisky@cea.ericsson.se

ERICSSON SOUTH AFRICA (PTY) LTD

Support Engineers / Group Managers and Service Delivery Managers. Ericsson South Africa is looking for team players that have excellent interpersonal skills with a high regard for customer satisfaction to work in our Field Support Centre. The main focus of the job is to offer competent technical support to operators of a contracted GSM Network in South Africa and certain other countries in the Sub-Continent.

● The successful applicants must be flexible to travel as well as being responsive to new challenges. The successful candidates are to be accountable and responsible in the efficient handling of the System Support function within the FSC. The co-operation in developing the expertise and transfer of knowledge within the department is a required function. We are looking for candidates who meet the following requirements: At least 3-5 years experience working in a support environment. Network integration experience is an advantage. Excellent Fault finding capabilities as well as knowledge and experience of all related tools used in a support environment. Ericsson South Africa has the following positions available in the FSC:

2 Sr BSS Support Engineers

1 BSS Group Manager

1 Sr SS Support Engineer

1 Sr OSS Support Engineer

1 Sr IN Support Engineer (prepaid and/or MVPN)

3 Service Delivery Managers

Contact: Eric Liddell, Manager: Field Support Centre, +27 11 2832097 or +27 83 2120672, eric.liddell@esa.ericsson.se. **Application:** Nadia Radjoo: Senior HR Officer, +27 11 2832178 or +27 83 2226124, nadia.radjoo@esa.ericsson.se

ERICSSON LIBYA

GSM Support Engineer

The business with our customers in Libya is expanding fast and new opportunities are emerging. This is creating exciting and challenging openings for support engineers to work with network support and associated fields such as IN. Libya is otherwise with very friendly people and a mild climate. As Ericsson employee you are living in a camp with lots of facilities both for working and leisure.

● You will perform Technical support on the Mobile network elements MSC, BSC, HLR and SSCP. You will also be involved in all the related FSC activities, such as CSR and TR handling, SW upgrades and updates, recommend improvements, Participate in the 24hr emergency support and perform SW troubleshooting. The task includes transfer of knowledge to less experienced team members, and also to provide technical advice and assistance to engineers and managers.

The Competence Requirements are: Minimum 4 years of working experience on AXE 10 application systems, of which at least 2 years should be on CME20/CMS40 systems, preferably within the area of system support. The position requires good system knowledge and trouble shooting skills. Experience on IN is desirable. It is very important that you are customer oriented, flexible and are able to work in team. The candidate must have good English skills both spoken and written.

Contact: Fredrik.Ljung@ericsson.ly +218 21 3615000/404, Ranko.Grudic@ericsson.ly +218 21 3615000/154, HR Manager Rolf.Skagerborg@ericsson.ly, +218 21 3615000/421

ERICSSON ARGENTINA

ND/NPI Consultants – Argentina. Ericsson Argentina has decided to start up an ND/NPI Service Delivery unit in Buenos Aires to primarily support the Argentinean market. The current ND/NPI team needs mainly additional expertise in the field of GSM/GPRS. This in order to supply our customers with complete network solutions and high-level consulting services. The offered positions will present a great challenge to develop business and support the technological shift of the operators in Argentina. The following positions are available:

ND/NPI Manager

● As the ND/NPI Manager you will be responsible for management and development of the ND&NPI team. The result of your work will be measured on the success of the business. We expect you to work very close to the customers in Argentina to understand their needs.

Sr Radio Network Performance Improvement/ Design Consultant

● will be responsible for technical or project lead in design and optimization services with the main focus on advanced trouble shooting, analysis and resolution of problem in the GSM/GPRS Radio network.

Sr Core Network Design Consultant

● will be responsible for technical or project lead in design of the GSM/GPRS core network including all the different nodes both regarding the CS and PS traffic.

Sr Transmission Network Design Consultant

● will be responsible for technical or project lead in design of the access network including technologies such as PDH/SDH over Mini-Link or/and leased lines. Location & Duration. 1 year contract in Buenos Aires, Argentina. 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 Extensive technical knowledge in the field of GSM Radio Optimization/Design, GSM/GPRS Core Network Design or Transmission Design.

Contact: Maria Eugenia Pistacchia, HR Ericsson Argentina (CEA), +54 11 4319 5500 Ivan Lemos Bicalho, Senior Consultant, +54 11 4319 5500, ext. 297.

ERICSSON CANADA, MISSISSAUGA, CANADA

Technical Assistance Specialist, Switch Services

● Degree in engineering, engineering technology ,computer science or equivalent work experience. Several years telecommunications experience in design, test and/or operations, Working knowledge of TDMA \ GSM cellular networks. Five years experience with Ericsson (AXE10) switching equipment. AXE Software (i.e. PLEX) literacy an asset. GPRS, Remote Upgrade, AP, APZ 212 30 competence are definitely an asset. Excellent oral and written communication skills. Able to work in a fast paced, demanding, challenging environment and deal with customers with confidence and diplomacy

Job Description: Direct Customer Interface for 24 hour "First Line" technical/emergency support for TDMA and/or GSM networks in Canada. Implement and maintain software corrections and features on customer equipment. Resolve technical faults and customer complaints using advance troubleshooting skills and minimize trouble report turn around time. Provide customer guidance and support for the maintenance of network equipment. Responsible for integration and testing of new AS. Escalation and follow up of troubles to Second Line support. Record accurate technical logs using trouble reporting applications. Communicate and assist customer/ field personnel in technical and operational questions. Assist in emergency situations to resolve equipment and/or procedure errors. Planning, control and direction of a CNA implementation. Key player in deployment of leading edge wireless technology, WAP, GPRS, 3G.

Contact: Klaus Boeckers, Switch Service Manager, + 1905 206 7488, klaus.boeckers@emc.ericsson.se

ERICSSON INTERNET SOLUTIONS, DIA PORTUGAL

Manager Mobile Internet Consulting

It's about to revolutionize.... Your everyday life. Ericsson believes in an all communicating world, where voice, data, images and video are conveniently communicated anywhere and anytime in the world. Internet-based applications and solutions are key enablers for this world and Division of Internet Applications and Solutions (DIA) is therefore essential for the mobile Internet market to happen. With unique competence in positioning, secure transactions and messaging, Ericsson drives the mobile Internet applications industry.

Together with our partners, Division of Internet Applications and Solutions develops breakthrough applications and also offers a platform for running and developing applications. Our consultants deliver Internet solutions including advice, systems integration and facility management for operators, service providers and enterprises within the areas of location-based services, m-commerce, messaging, portals and infotainment. Division of Internet Applications and Solutions today consists of about 4000 people, which is a continuously growing number. We work on both a local and global basis and are represented in about 40 countries around the world.

● As a Manager for Mobile Internet Consulting you will establish Mobile Internet Consulting as a business in Portugal and support 3G sales. You will build a core team of Business and System Integration Consultants to address the Portuguese market. This is expected to be a long-term assignment. Build-up and management of a consulting organisation in the Mobile Internet Market. Support of KAM's in marketing and sales of consulting. Support /Management of the partner programme of DIA in Portugal. Establishment of Ericsson Portugal on the Portuguese Mobile Internet Market. Marketing and sales strategy and its implementation for consulting. P&L for Mobile Internet Consulting. Recruitment

Major challenges. Ericsson has a strong position in the Telecom market of Portugal, with 22% of the total market and more than 60% of mobile infrastructure. We are suppliers to all mobile operators and both leading new operators in the deregulated fixed services. The challenge is to build a consulting organisation from scratch. Few or no resources exist in this area today, but there is a healthy demand from our three mobile operator customers, as well as the emerging fixed line operators and ISP's. For the right person with management as well as consultative skills, this is an opportunity to form something new, without legacy, and to establish Ericsson in this area in Portugal. Your background. M.Sc./M.B.A. with experience of management in consulting organisation. Experience of Telecom and/or IT industry. Entrepreneur. Cultural Awareness. Experience of Portuguese/Spanish language and Latin culture is beneficial.

Contact: Mirjam Warne-Graf, People & Culture/HR, Ericsson Internet Solutions, +46 8 4222699 or Mats Lindelöw, DIA Manager Portugal, +351 214466556. **Application:** mirjam.warne-graf@bct.ericsson.se.

ERICSSON LTD, UK

Manager Sales & Support EMEA

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.

● 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 rollout, 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: myfuture@etl.ericsson.se quote ref 492. HR Resourcing contact, Louise Doherty)

NANJING ERICSSON COMMUNIC LTD CHINA

MSC/BSC/HLR Tester

China region central has many GSM expansion projects that will be implemented in year 2001. So we need to strengthen our tester team. For that we need Experienced MSC/BSC/HLR testers for our customer service center.

● The work includes: Testing of new MSCs/BSCs/HLRs and expansions in live switches, DT loading and verification, Integration test and traffic case test with other network nodes (such as PSTN,GMSC..), Software upgrading from R7/R71 to R8 with remote loading, hardware replacement, such as APZ replacement, AC-A and CN-A rollouts in the network. Another task is to transfer know how to our local MSC/ BSC/ HLR testers. Experience in IOG20, APZ 212 30,R8 and new BYB 501 is required.

The candidate must have worked for ERICSSON at least 2 years within MSC/BSC/HLR areas and have good English skills, good human skills and ability to work with people from different cultures.

Contact: ShanJun Wang, GSM Testing, NanJing Ericsson Comm. Co Ltd., No.32 Chi Tian Road, JiangNing E&T Development Zone NanJing, PRC, +86 25 2101188/2125, Fax: +86 25 2104482, ShanJun.Wang@enc.ericsson.se

ERICSSON SA, SPAIN R&D, MARKET DESIGN SOLUTIONS CENTER

SW Designer

The EEM Market Design Solutions Center is a development center located in Madrid and our mission is to handle market function assignments in a fast and responsible way within Ericsson Organization to help our customers, Customer Groups and Market Units to win more business. We perform system investigations and SW Design within the whole AXE System to give Design Solution for our customer.

● As Software Designer, you will be involved in Market Design Projects running at EEM MSDC during the Design and Test phase. The Design part will be mainly the implementation of market functionality's in AXE products. During the test phase you will perform test analyses, general test reports for Market products.

We think that you shall have a technical degree or comparable, preferably in telecommunication and 1-2 years experience in design and test in any of AXE System we work with, like TCS, TSS, IN_SSF, CHS, Access. In addition you will get opportunities to acquire understanding, knowledge, general view of the AXE Design products areas and also training in them.

System Engineers

● As System Engineer, you will receive the requirements from the customer to implement Market Functionality and you will be able to provide them with an optimal technically and project wise. You shall have a good understanding of the AXE System and experience in multiple product areas like TCS, TSS, IN_SSF, CHS, Access; and shall also have a customer focused approach to the development of a total solution. You will build up a contact network with a variety of people from marketing and the product responsible in the different PU/PA's and you will have the possibility to be involved in Market Projects as technical Coordinator to improve your competence as System Engineer in all the AXE Word. Our Web: http://alvaro.es.eu.ericsson.se/tl/ftgen/ftgen.html

Contact: Luis Cardenas, +34 91 339 2154 or +34 699 427578, luis.cardenas-zapata@ece.ericsson.se. **Application:** Ericsson S.A, Indocentro, Retama 7, 4ª Planta 28045 Madrid.

ERICSSON EUROLAB NETHERLANDS

Technical Writer

Within The Netherlands, the Charging Competence Centre @ ELN is one of the R&D departments of the newly formed ELN (Ericsson EuroLab Netherlands). This R&D organization has a broad variety in products, varying from terminals for home communications to network software and applications The Charging Competence Centre @ ELN hosts three Product Areas connected to the CAPC Sub Core Product Units Transit and FCAPS. We have charging as domain knowledge in wireline and wireless systems. We are responsible for the development of software applications made in C++ and JAVA. Within a worldwide operating product unit, we are responsible for developing applications on the Adjunct Processor (AP) that format charging data and provide it to post-processing systems. We are also responsible for setting-up an "application platform" on the AP based on software reuse. We use Object-Oriented development practices and a proprietary (home made) development process (IDIOM).

We are organised in self-steering teams, because we believe that eventually that is the most efficient, but also providing a working atmosphere. Teams are besides developing products also responsible for the detailed planning, for competence build-up and for developing as a team. Within the team every individual performs several tasks, what leads to a varied work package. Also contacts outside the team are of a crucial importance. We guarantees a pleasantly open working environment, focus on personal development and challenging innovative work. We are looking for people who prefer to perform in a professional team.

● As Technical Writer you bridge the gap between technique and the end user. Since you have the ability to look at our products from a user's point of view, you are able to explain the features of our software in a structured and user friendly way. You obtain the knowledge of these features by a close contact with the software (test) designers. In order to realise this achievement, your have a higher technical education. On top of that you can speak and write english very well. Preferably you have experience in a similar position working for a vendor of technologically advanced products. You have a strong ambition to strengthen your knowledge in the field of information and communication technology. Finally you are characterised by a pro-active attitude and excellent communication skills.

Contact: +31 161 249553. Erwin.Sponselee@-eln.ericsson.se. Charging Competence Centre@ELN, Rijen.

ERICSSON IP INFRASTRUCTURE, BELGIUM

Level 3 IP Support Engineers

The support engineer will provide 2nr/3rd level technical assistance on AXI 520, 540 and 580 products to the Ericsson Market Units. AXI-520, AXI-580 are Juniper OEM products, AXI-540 is an Ericsson router using most of the Cisco IOS CLI commands. This responsibility is European-wide, covering all Ericsson EMEA subsidiaries.This position is based at the European TAC Centre of Ericsson IP Infrastructure (Waterloo, Belgium). Travel to customer sites maybe from time to time required.The support engineer will be part of the Ericsson IP Infrastructure product unit. Ericsson IP infrastructure is a member of the Data Backbone & Optical business unit (DBO).

● The skills / experience required for the CS SE include:In-depth understanding of IP Routing technologies (BGP, IS-IS, OSPF...).Good understanding of IP Services (Multicast, Diff-Serv CoS, MPLS & VPN's).Good understanding of ATM, POS, Ethernet technologies. Overall understanding of the TelCo/ ISP market.Overall understanding of SNMP and network Management principles.

Any of the following technologies knowledge communications are a plus: X.25, ISDN, xDSL, E1, E3, Channelized STM1, GPRS, UMTS.Good knowledge of dominant operating systems like UNIX, Windows NT/2000 is a plus. CISCO and/or Juniper knowledge are a plus. 5+ years experience in a Customer Service organisation (preferably European TAC). Strong written and verbal communication skills. Team player with a "customer first" attitude. Fluent in English.Other European languages are a plus.

Consultant & Network Design Support Engineer

Overall responsibility is to provide network design and consultancy using mainly AXI 520, 540 and 580 products to the Ericsson Market Units. AXI-520, AXI-580 are Juniper OEM products, AXI-540 is an Ericsson router using most of the Cisco IOS CLI commands. The application can be on a wire line network as in a wireless solution for GPRS and UMTS purposes. This responsibility is European-wide, covering all Ericsson EMEA subsidiaries.

This position is based at the European TAC Centre of Ericsson IP Infrastructure (Waterloo, Belgium). Travel to customer sites maybe from time to time required. The support engineer will be part of the Ericsson IP Infrastructure product unit (HQ in Rockville Maryland USA). Ericsson IP infrastructure is a member of the Data Backbone & Optical business unit (DBO).

● The skills / experience required for the CS SE include:In-depth understanding of IP Routing technologies (BGP, IS-IS, OSPF...).Good understanding of IP Services (Multicast, Diff-Serv CoS, MPLS & VPN's). Good understanding of ATM, POS, Ethernet technologies. Some experience using performance measurement tools and network simulation system. Overall understanding of the TelCo/ISP market. Overall understanding of SNMP and network Management principles.

Any of the following technologies knowledge communications are a plus: X.25, ISDN, xDSL, E1, E3, Channelized STM1, GPRS, UMTS.Good knowledge of dominant operating systems like UNIX, Windows NT/2000 is a plus. CISCO and/or Juniper knowledge are a plus. 7+ years experience in a Customer Service organisation with a good experience in network design and network maintenance tasks. Strong written and verbal communication skills. Good presentation skills. Team player with a customer first attitude. Fluent in English. Other European languages are a plus.

Contact: Ericsson_IPI_EMEA_JOB@hotmail.com,

NIPPON ERICSSON K.K, JAPAN

ITAC Engineer

ITAC, Implementation Technical Assistant Center, in Japan is part of the CMS30 System Integration Department. Our area of responsibility is verification and deployment of HW installation test and integration methods and procedures for CMS30. We are now gearing up to take on the same challenge for the 3G IMT-2000 system that will be launched in Japan during 2001.

● We have several open positions in the Osaka and Tokyo area for highly experienced installation test and integration engineers. You will mainly work with developing and verifying HW test and integration instruction, FOA HW implementation and providing training and support for our test teams. Cus-

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.

● **Software Engineers (Open Systems)**
As a Software Engineer you will be working with applications for the management and control of Wireline and Wireless networks within Mobile and Fixed telecom domains. You must have experience in developing on Open Systems (Unix preferably). Necessary skills include; C, C++, Java, Erlang /OTP, use case modeling techniques, Object orientated Analysis and Design techniques, especially UML, RUP (Rational Unified Process). Some telecom exposure and experience with Multi-tiered architectures and real time distributed systems would be of benefit.

● **Software and System Engineers (AXE 10)**
EEI NOSC develop a range of AXE Based Core applications (OAM, Speech Processing) for UMTS, Next Generation Wireline and 2G and 2.5G Mobile Systems. We are seeking competent AXE 10 Software professionals to work in the design, test, team leading and technical co-ordinaton roles in our development projects. We are also seeking Systems Engineers with at least five years AXE and Telecoms experience to work in pre-design phases with the architectural design and specification of applications and features for next generation networks.

● **Software Quality Engineer**
As a Software Quality Engineer you will work proactively towards the organisation's software development units by supporting Project Quality Coordinators, defining and analysing software quality measurements and identifying best practices. The role will involve maintenance of the existing quality system by ensuring compliance to ISO9001:2000 and facilitation of CMMI maturity progression. You will also be required to summarise and present quality system performance at periodic management reviews. Experience and knowledge of quality issues in software development is desirable.

● **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 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 handle customer requirements for Management Applications and features for defining new functionality and 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/International Account Managers (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 'wireline operator market', selling Telecom Management Products. 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.

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

tomer focus, ability to work under pressure and flexibility is expected. Experience in UMTS, GPRS, datacom and UNIX is an extra plus.

Contact: Johan Myhrman, johan.myhrman@nrj.ericsson.se, +81 45 477 5582

MSC Testing Supervisor

Tokyo Network is composed of 15 MSCs 10 TMSCs and 5 HLRs. A big expansion project is ahead and we need to strengthen our MSC tester team. For that we need an Experienced MSC Testing Supervisor to our Network Center.

● You should have solid AXE background with at least 5 years experience in testing. Experience from Mobile application is mandatory. The candidate should have excellent knowledge of the new BYB501 HW with ability to quickly trouble shoot testing problems.

Your task will be mainly supervising a team of 10 to 12 testers, giving technical advice and seeking solutions as well as coordinating all testing activities within the network center.

As a supervisor the candidate should have excellent personal skills with ability to lead the testing team. Therefore experience, as team leader is required for the job. Ability to work in an international environment with different people from different cultures and openness is highly required. Included in the job, is also customer interfacing and interfacing other department. The candidate has to be fluent in spoken and written English.

Contact/Application: driss.jirari@nrj.ericsson.se

ERICSSON AUSTRALIA LTD, PTY, REGIONAL SUPPORT CENTRE, ASIA PACIFIC – TEAM MELBOURNE

Manager

ref.no 00:1417

Ericsson Enterprise, Region Asia Pacific has a position vacant for Manager of the Regional Support Centre Asia Pacific – Team Melbourne. It is based in Melbourne.

This position is to manage the day to day operations of the team providing expert service support towards Ericsson Enterprise Service Partners for Ericsson Enterprise products and solutions installed in the Asia Pacific Region, focusing on Australia and New Zealand.

● RESPONSIBILITY: Responsible for the service delivery to Ericsson Enterprise Service Partners and customers in Asia Pacific region with main focus on Australia and New Zealand. Secure competence and proper amount of resources to deliver services according to contracted obligations and to meet other business opportunities. Implement and develop the Service Delivery process and methods to enable a global service offering.

AUTHORITY: Managing the service support organisation in Australia. Approve new contracts in respect of services to be delivered. Initiate improvements of current delivery processes. Initiate Service Partner's suspension process if necessary.

MAIN DELIVERABLES: Services according to the defined services product portfolio. Escalation management.

INTERFACES: Regional Support Centre Asia Pacific Manager, Regional Business Director for Australia and New Zealand, Service Partners, Introduction & Validation, Regional Training Centres.

MEASUREMENT: Main measurement is utilisation of existing resources to secure a cost effective service organisation. Other KPI's will also be used for benchmarking of the different teams within Regional Support Centre Asia Pacific.

COMPETENCE / EXPERIENCE: Customer focus. Degree in Telecommunications, IT or similar is desirable however TAFE. Certificate of Technology (or equivalent) holders with minimum of 10 years of relevant experiences can also apply. 5 years of service operations with proven success. Demonstrated leadership capabilities. Good communication and interpersonal skills.

EMPLOYEES ARE TO INFORM THEIR MANAGER OF THEIR INTENTION TO APPLY FOR INTERNALLY ADVERTISED POSITIONS. LOCAL TERMS & CONDITIONS WILL APPLY FOR THIS POSITION

Contact: Martin.Kulic@ebc.ericsson.se, +60 3 708 7723. **Application latest 010130:** samantha.ratnapala@ericsson.com.au

ERICSSON RADIO ACCESS AB, KISTA

Test & Configuration Technician - CTS

Business Unit Transmission Mobile Systems, within the Division Mobile Systems, is responsible for providing cellular and business access transmission products and solutions satisfying the needs of Telecom Operators – Anywhere, Anytime. Our product unit Cellular Transmission Solutions in Kista is responsible for total transmission solutions and is the main interface towards the Development Units within other business units.Represented in more than 100 countries, we are today the market leader in our field of activities.

Our product portfolio consists of:A wide range of PHD and SDH cross-connect systems with a flexible, managed platform for the entire network transmission infrastructure leading to improved control and efficiency.MINI-LINK™ E- a point-to-point microwave system for capacities from 2 up to 17x2 Mbit/s.

MINI-LINK™ BAS – a new broadband access system, optimized for the increasing needs for high-speed multimedia applications.Open and integrated management systems to provide total network transmission solutions.

● We are currently looking for two test- & configuration technicians who will be responsible for setting up, testing and configurating transmission equipment (DXX), order reporting in SAP (R/3), some stock processing (in- and outflow), as well as periodic stock inventories.

You will be a technical college engineer or equivalent with experience in the field of test - & configuration of transmission equipment. Previous work experience within the field of SAP is an advantage.

You will be proficient in both spoken and written Swedish and English. You will be innovative, persevering and meticulous, open, outgoing, goal-oriented and have good social skills. You have a well-developed sense for organization and structure. You will find it easy to communicate and co-operate with others but you will also be able to work independently. You feel responsible and have the desire to bring together theory and practice.

Contact: Todd Barrett, + 46 8 757 21 94, Per-Gunnar Nyström, Personnel, +46 8 764 15 39.
Application: Ericsson Radio Access AB, KI/RSA/HPS Personal, Box 11, SE-164 93 Stockholm, Sweden, Jobb@rsa.ericsson.se

ERICSSON RADIO ACCESS AB, KISTA

Packaging Engineer

for the Supply Unit Ericsson Radio Access AB (RSA) has a widely recognised, broad expertise in the field of cellular system. We are responsible for the design of antenna near products and power amplifiers within the radio base stations of all the commercial mobile telephone systems all-round the work, e.g. GSM, CDMA, WCDMA and Operational Development.

The main part of our operation is situated in Kista, and we currently employ around 1,400 people.

● In your role as Packaging Engineer, you will be responsible for the entire range of the packaging process. More specifically, this will entail planning/implementation of strategies, routines/methods, leading development projects and a number of other responsibilities related to the development/implementation of training/educational programs, providing guidance/support regarding packaging issues to various functions within RSA's manufacturing/development units, etc....

You will ideally be a graduate engineer specialising in packaging/distribution lines. You should have worked with or have knowledge about packaging material selection and have experience of various alternatives to be applied, taking into account the product/transportation methods, ESD, vibration sensitivity, pressure, corrosion risks and specifications of requirements and assessments.

We expect you to have the ability to apply an "overall approach", i.e. to understand how our various processes/operations function together and how we should improve those in order to optimise our packaging, delivery and transport capacities in combination with a structured sense of developing new and adequate concepts.

We want you to be results-oriented, innovative and have an analytical mind. You find it easy to co-operate with others and are interested in packaging and environmental issues.

Contact: Björn Fredriksson, +46 8 404 78 14, Pia Bolmgren Svensson, Personnel, +46 8 585 341 35.

Unit Manager for Filter Design for GSM

● You will be part of a team of line managers who will jointly shape the development work for the GSM product line. The work as manager of the Filter Design Unit will include: Motivating and developing the employees. Developing design methodology. Being responsible for the personnel's skills development within simulation work. Being responsible for recruiting and the allocation of work.

The successful candidate will be a graduate engineer or equivalent. You will ideally have experience in the mobile telephony industry, as well as experience of project management or general management.Experience as a hardware designer is an advantage.

In order to succeed as Unit Manager, your personal characteristics and experiences are important. Typical managerial skills such as sensitivity, perseverance, driving force, the ability to co-operate and interest in people are all highly valued in this position. We also require you to be proficient in both spoken and written English and Swedish.

Contact: Christer Bardland, +46 8 757 25 81, Lena Skansjö, Personnel, +46 8 508 78 263.
Application: Ericsson Radio Access AB, KI/RSA/HPS Personal, Box 11, SE-164 93 Stockholm, SWEDEN, Jobb@rsa.ericsson.se

ERICSSON RADIO ACCESS AB, KISTA

Local Representative in Tallinn

● We are currently in a need for increased local presence in Tallinn, Estonia, and will need, for this purpose, a Local Representative, at senior level, whose main responsibilities will be to lead the:

Planning/setting up and follow up on Key Performance Indicators at suppliers. Coordination and follow up on improvement programs at Suppliers. Monitoring of short range plans and deliveries from and to Customers. The first escalation step between RSA and Suppliers and to ensure its implementation.

You will take on the role of RSA's link externally and act as our RSA representative, at all occasions, in local steering groups for Transfer Projects and New Production projects. You will be located at the local Ericsson office in Tallinn.

You will ideally be a graduate engineer/economist, or equivalent, with solid experience in improvement work, particularly in logistic flows. Previous management experience constitutes a great advantage, as you will work on the Plant management level in the factory. You should thus have pronounced managerial skills, above all the ability to stipulate demands. You will also have a diplomatic nature; you are able to establish relevant contacts and possess excellent negotiating as well as social skills. You will also be fully proficient in both spoken and written English.

Contact: Aivars Kubulnieks, +46 8 757 71 553, Johan Håkansson, +46 70 34 031 80, Pia Bolmgren Svensson, Personnel, +46 8 585 341 35.

Program Managers Global Manufacturing

● In your role as Program Manager for Global Manufacturing, you will be responsible for all relevant activities with 1 – 2 specific Electronic Manufacturing Services(EMS)/partners, involving development- and production transfer agreements as well as negotiations, on a quarterly basis, with focus on cost decreases efforts, capacity assurance, delivery accuracy, global coverage, etc...

You will take part in development projects entailing among others drawing up/follow up on timetables in conjunction with the EMS. You will also be able to initiate and push regional development programs for materials supply as well as to assess supplier bases taking into account new requirements set up by the product management.

You will ideally be a graduate engineer/economist, or equivalent. You will have a thorough experience of the international supplier market as well as product supply (logistics). In addition, you have previous experience as a Project Manager or Purchasing Manager.

We believe that you will be structured, cost-aware, innovative, outgoing, daring to be questioning results and progressive with a definite goal-oriented approach. You have good analytical abilities and find it easy to communicate and co-operate. You will be proficient in both spoken and written Swedish and English. You should also be prepared for a fair amount of travelling.

Contact: Johan Håkansson, 070-34 031 80, Pia Bolmgren Svensson, Personnel, +46 8 585 341 35.
Application: Ericsson Radio Access AB, KI/RSA/HPS Personal, Box 11, SE-164 93 Stockholm, SWEDEN, Jobb@rsa.ericsson.se.

ERICSSON SERVICES IRELAND

Senior Support Specialist

A vacancy has arisen for the position of Senior Support Specialist within the Customer Service Centre, based in Dun Laoghaire, Co. Dublin.

Applicants should have ideally excelled in the AXE field (IN Platforms) and have a strong knowledge of the PPL area.

● RESPONSIBILITIES: Ability to diagnose and provide solutions to a range of complex problems in the PPL field.Willing to travel at anytime to any of the CSC PPL Markets. Demonstrate team leadership qualities in a technical capacity. Self motivation and the ability to motivate others. Willing to get involved in the third generation mobile standards, and develop their skills to the future technology. Flexibility in technical evolution of the CSC Department and ability to visualise new and growing opportunities in the PPL Group and CSC as well as a good knowledge of existing departmental processes.

To be seen as a mentor to the new recruits within CSC. Proven capability of giving detailed presentations to customers both internally and externally. Must possess excellent customer handling skills.

EXPERIENCE: The candidate must be capable of working as part of a team in delivering first-class service to the customers and of actively contributing to the development of the group in achieving the goals set in respect of quality standards, cost targets and delivery precision.

The ideal candidate must be an excellent communicator especially on technical matters and be capable of working to deadlines. As the work involves foreign travel the candidate must be prepared to travel as necessitated by the work programme.

In the Customer Services Centre (CSC), we have responsibility for integration of customer management applications into our customers' businesses as well as for network integration and support.

A vacancy exists for the role of Mediation Engineer. Whilst Customer Management Applications will be our initial focus, the real challenge for the Systems Integration group will be the ability to identify and solve adjacent systems integration requirements within an operator's environment, thereby enabling our customers to leverage investments in existing technologies. As this is a new service within the Ericsson Services portfolio, this is an exciting opportunity to join a startup group and grow rapidly with the group.

The opportunity presented offers multiple challenges. It will require creative thinking, the ability to identify and deliver high-value development services, and the ability to work in a team of application developers. A general awareness of the Operators business environment is necessary for this role.

Mediation Engineer

● Working closely with the Solutions Architect, your responsibilities will include: Technical Evaluation of an operators environment. Customisation of Customer Management applications and interfaces based on technical survey of the operators environment. On-site delivery and on-going support of delivered system.

Skills profile for analyst/programmer role: Network Element provisioning experience using products such as: Xacct, ASAP, SAS or EHPT Initiator. Usage collection experience using products such as:Comptel AMD, Billdats or EHPT BMP. 2+ Years commercial experience as a programmer. Knowledge of Billing and/or Mediation applications including Setup, Configuration & Troubleshooting, Delivery and Ongoing Support, as well as integration into an operator's environment. Telecoms background a distinct advantage. Good knowledge of UNIX and scripting languages, such as PERL. Working knowledge of databases such as Sybase and Oracle. Strong programming skills with proven track-record in development (using e.g.: C++). Strong Analysis, Communication and Presentation Skills Imperative. Willingness to travel.

Analyst/Programmer

● Working closely with the Solutions Architect, your responsibilities will include: Technical Evaluation of an operators environment. Customisation of Customer Management applications and interfaces based on technical survey of the operators environment. On-site delivery and on-going support of delivered system.

Skills profile for analyst/programmer role: 2+ Years commercial experience as a programmer. Knowledge of Billing and/or Mediation applications required. Telecoms background a distinct advantage. Good knowledge of UNIX and scripting languages, such as PERL.Working knowledge of databases such as Sybase and Oracle. Strong programming skills with proven track-record in development (using e.g.: C++). Strong Analysis, Communication and Presentation Skills Imperative. Willingness to travel.

Contact: A. Keane, Recr. Ericsson Services Ireland, Adelphi Centre, Upper George's Street, Dun Laoghaire, Co. Dublin, Ireland, +353 1 2364634, Andrea.Keane@eei.ericsson.se

e-Business Solutions (a Dun Laoghaire based Business Unit within Ericsson Services Ireland) is currently recruiting an

Unit Manager

● By incorporating the leading edge technology, e-Business Solutions, (e-BS) develops and deploys solutions for the global market. e-BS has the Regional Integration Centre responsibility for all Ericsson mobile internet applications and solutions i.e. Web-on-Air, Ericsson Virtual Office, WAP Gateway, Jambala, Mobile e-Pay, WISE. e-BS are also actively involved in e-commerce application development and web services, which includes business consulting, integration, implementation and support services.

The e-BS Unit Manager will have the ability to develop the existing e-BS services offering and should have the vision to expand these services to match the needs of the future. The candidate will be capable of working with a large degree of independence and actively contribute to areas across the whole of eBS.

The main role of the position is to provide clear and strong leadership, driving towards the eBS goals set in respect of quality standards, employee satisfaction, competence profile, business targets and service provisioning. A willingness to travel is a requirement.

Responsibilities include:Overall responsibility for the Regional Integration Centre (RIC) day to day operations.Development of the appropriate competence and quality processes to ensure the smooth running of the RICLine Management, including appraisals, staff training and team coaching. To represent the RIC (and eBS where appropriate) both within & outside Ericsson. To build on existing development plans to secure the long term growth of the RIC and eBS

Applicants will be qualified at degree level and will have relevent experience in technical and business matters. We are looking for pro-active individuals with strong communication, problem solving and decision-making skills able to work in a dynamic and challenging environment. Demonstration of previous Management or Leadership skills in the Telecoms or Infocom industries is a definite advantage.

Test Configuration Manager

● The e-BS Test Configuration Manager must have previous experience as an AXE Trouble Shooter and must be able to provide a quality service to the users of the Test Plant ensuring that all of the activities carried out using the facilities are done so to the highest standards within a safe and comfortable environment.A willingness to travel is a requirement.

Responsibilities include:Configuration, Upgrades and Updates of the System Test Plant (STP). The STP will be used for various projects like WAP Gateway Proxy Test & Verification, IN and GPRS testing and trouble shooting. Testing of various Ericsson Mobile Internet and other 3rd party products. Customer Demonstrations of new products. Work closely with project managers as each project will require an individual test configuration. Operation and Maintenance of MSC/BSC's, specifically covering. Configuration Management including dump handling, ordering and installation of new/faulty HW, Base Station O&M, terminal and SIM card administration.

Applicants will be qualified at degree level and will have relevant technical. Must possess strong hardware/software trouble shooting capabilities. Minimum 1-3 years of hands on AXE 10 operational/implementation experience in a mobile switching environment. Strong people and communication skills.

Contact/Application latest 010202: Kuljinder Kaur, Recruitment Specialist, Ericsson Services, Ireland, Adelphi Centre, Dun Laoghaire, Kuljinder.kaur@eei.ericsson.se.

TELECOM MANAGEMENT SOLUTIONS

Operational Product Manager - FraudOffice

FraudOffice is the Ericsson Fraud Management System designed to assist Operators in their battle against fraudulent network and services use. FraudOffice is built on an Open Systems based IT architecture. Target customers within the Operator's organization range from the IT department through Network Security and to Finance.

The available position is for a technically aware, business minded person, who will play a central role in developing the evolution of FraudOffice as a profitable and competitive solution within the Ericsson Security Management product portfolio. Based in Dun Laoghaire and reporting to the Strategic Product Manager, the FraudOffice OPM will support the total business process from idea generation through software development, project delivery and support.

● The Operational Product Manager will have responsibility for: Implementation of product strategies for FraudOffice. Requirements management from customers through to development and test. Development of the Product Requirement Specifications in line with the Rational Rose methodology and tool set.

Activities will include: Gather and manage product requirements from internal and external sources. Initiate technical studies and new product development activities and projects. Cooperate with development to track and review product delivery. Respond to market queries and assist the sales and development departments with RFP responses. Produce release documentation. Sales channel support. Customer presentations. A balanced combination of communication skills, technical appreciation and enthusiasm will provide us with the person we need.

It is likely that this person will have a track record in product development and/or delivery, with an awareness of sales and marketing of IT based solutions. Some international travel is envisaged.

Application latest 010203: Andrea.keane@eei.ericsson.seRecr, Ericsson Services Ireland, Adelphi Centre, Upper George's Street, Dun Laoghaire, Co. Dublin, +353 1 2364634,

ERICSSON TELECOMUNICAÇÕES, PORTUGAL

BSS Support Engineer

Ericsson Telecomunicacoes Lda in Lisbon/Portugal is looking for a BSS system support engineer to join the SS support team in our Customer Services Division, based in Lisbon.

We offer you a long term assignment in a warm and nice country. Ericsson in Portugal is supplier of AXE equipment for all three GSM operators and two wireline operators. Our support organisation is established since 1992.

● Main responsibilities: You have to be involved in all main FSC customer support processes: CSR Handling (TR and Consultation), Emergency service, SW update/upgrade. A very important role is to transfer competence to the local staff.

Requirements: At least 3 years technical experience working with GSM BSS system, preferably with system support. Good system knowledge (including GPRS) and SW troubleshooting skills. Knowledge of support processes and tools. Good english and communication skills. Experience with GPRS, OSS applications and remote loading techniques are appreciated.

We will only consider candidates employed by Ericsson.

Contact/Application: vasco.alpalhao@-sep.ericsson.se, +351 214466253 or luiz.ofner@sep.ericsson.se, +351 214466288. Ericsson Telecomunicaçoes, Lda. Edificio Infante D. Henrique, Quinta da Fonte - Porto Salvo, 2780 - 730 Paço de Arcos, PORTUGAL

ERICSSON BRUSSELS

Key Account Manager

● Develop relationships with Key Accounts and Prospects to strategic partnerships. Job package: Sign Frame agreements/ Letter of Intents or equiv., corresponding to strategic partnerships. Increase sales of designated Key Accounts (KA's) and Prospects (KP's) by expanding geographically and by expanding the Ericsson products and services portfolio. Act a Ericsson contact to designated Key Accounts and Prospects. Improve and maintain high level Customer Satisfaction. Identify, qualify and develop new key account prospects

Qualifications: University degree in technical, economical or administrative field or equivalent. Solid experience in Account Management, Telecom or IT environment. Fluent in writing and speaking English and French. Independent, strategic, analytical-minded self motivated and organised. Team player. Minimum 10 years business experience in a multi-cultural environment. Excellent presentation skills. Good knowledge of Ericsson Enterprise products portfolio definite plus.

We provide: An international but informal environment, where communication always has a slight edge over technology. Where quality is second nature and initiative and personal evolution are essential. A challenging, future-oriented position with the necessary training and career possibilities

Application: jobs@ebr.ericsson.se

ERICSSON RADIO SYSTEMS AB, KISTA

User Group Manager

At Division Mobile Systems (DMS). The BMOS User Groups (SM/U) are looking for a User Group Manager.

The important customer groups where feedback, experiences and new information is exchanged between operators and Ericsson. Each user group holds 2-3 meetings annually. There are also continuous activities between the meetings such as action points resolving; detailed studies of selected areas etc.

The purpose of the user group manager role is to manage and co-ordinate the work within the User Group. This includes continuous and frequent contacts with the user group/user group chairman and a broad range of Ericsson organisations. The user group manager is the prime Ericsson contacts for the user group, and he/she holds the prime responsibility for the user group performance, evolution and success. SM/U also has a co-ordination responsibility towards other BMOS User Groups managed by PUs or MUs.

● The position as User Group manager requires substantial knowledge and experience in the areas of the telecommunication industry, Ericsson's activities and organisations worldwide, the Ericsson product portfolio in general and the mobile systems in more detail.

The position requires experiences from customer contacts, management experience and excellent communication skills. The User Group manager needs to apply both a business perspective and a technical perspective in order to understand the operator's business situation and objectives.

Contact: +46 70 576 20 67 monika.samuelsson@era.ericsson.se. **Application:** Ericsson Radio Systems AB, KI/ERA/SM/H, L-L Ramneby, 164 80 STOCKHOLM, lise-lotte.ramneby@lme.ericsson.se

ERICSSON LTD, TELECOMMUNICATIONS CENTRE, BURGESS HILL/GUILDFORD, UK

3G Service Network Technical Architect

The Architect will work on the 3G Service Network Design project and will be responsible for the design of the 3G Service Network.

● Tasks will include: Execute the Design in accordance with High Level Technical Solution produced by the ETL/Ericsson Consulting Solutions Managers. Lead the 3G Service Network Design Team facing towards our mobile customers. Develop and maintain a network of 3G Service Network experts from within Ericsson. Supervise on-the-job training for developing 3G Service Network Design Engineers. Proactively form a working co-operation with other Technical Architects within the design project. Reviewing current design and aligning with customer requirements. Designing and validating the design including the specification of the hardware/software platform. Planning the migration between agreed design stages. Specifying baseline technical requirements for each design stage. Reporting to the overall project manager on project progress and ensuring that deadlines are met and contingency options available for critical deliverables in the event of delays and/or failure to meet specifications. Ensuring the 3G Service Network design is integrated with all other sub-network areas and that all interfaces from the 3G core network are owned, managed and integrated. Coordinating the provision of information to the customer from Ericsson Product Units and 3rd party suppliers. Liaising with the customer. Transferring knowledge to the customer (including documentation). Peer interface to ETL/Ericsson Consulting to other consultants. Interface, coordination and handover to system verification, FOA and rollout organisations.

The role requires the job holder to be : a good team player, a good communicator and proficient at presenting ideas, highly motivated, a 'hands-on' manager prepared to take on technical tasks as and when necessary, a high degree of accuracy in the production of technical information, travel throughout the UK, some international travel may be required.

Experience in mobile communications with at least 2 years experience in Mobile Internet design and architecture for a mobile network operator or vendor. Successful track record leading team of technical network design engineers. Production of technical documents. Excellent report writing skills. Experience in a telecoms/datacoms and/or mobile ISP networking environment. Strong design level functional and architectural understanding of 3G Service Networks, IP networks, protocols and services. Strong design level understanding of transport networks, media gateways, synchronization, compression etc.

Knowledge of, experience in: Essential: 3G Service Networks (probably unlikely given new technology), IP (TCP/IP & UDP/IP), IP Infrastructure, Protocols - LDAP, HTTP, WML, ATM, AAL2. Knowledge of: UMTS, IN, SS7, GSM, GPRS, 3GFrame Relay, CORBA, WAP, OSA/VHE, Wireless Data, Network Dimensioning, Cell Planning, Traffic Modeling. Data/voice networking & IP, CISCO routers/switches, Networking Applications.

Contact: Vic Ient, vic.ient@etl.ericcsson.se, +44 1444 874883. **Application:** myfuture@etl.ericsson.se, quoting Ref 397.

Vice President required for emerging superpower

Ericsson is looking for an individual to play a key role in its fortunes in *India*, a country that is witnessing rapid leaps in the telecom sector. With a presence dating a 100 years, Ericsson today plays a vital role in providing key infrastructure to the Indian telecom industry. And stands poised to make the most of the Indian telecom revolution.

Responsibilities: As Vice President – Network Design and Field Support, you would be expected to take the lead in Network Design and Optimization in India. Along with round-the-clock sales field support for the fixed line/GSM networks for Ericsson customers across India. The networks already have functionality like IN, PPL, GPRS built into the networks and more and more are migrating towards 2.5/3G solutions. Your organization will provide support to the Marketing team during the Pre-sales process regarding the service offerings. You would work closely with the senior management within the Operators' organization. Outstanding technical leadership to lead a large team of nearly 50 very competent technical managers/specialists/engineers spread across India, by way of motivation, competence development and career enhancement are integral to the job. As part of the management team of ECI, you would be based in New Delhi, reporting to the Managing Director.

Qualifications: A University degree in Electrical, Electronics and Computer Science with 10-15 years of relevant work experience in the Telecommunications industry with the last few years in a Senior Technical position within Ericsson. Your technical knowledge should span the Telecommunication platform & AXE, MSC, BSC, OSS, Network Planning, Transmission etc. A good knowledge of Ericsson product offerings and an excellent contact network within the Ericsson organization would be essential. Strong leadership skills and exceptional interpersonal relations should be complemented by a broad knowledge of customer services, quality & technical management and project leadership. A keen understanding of the customers' business will be required. Moreover, you should possess excellent communication skills, with fluency in English.

So if you think you have it in you, please mail your resume to: hrc.eci@eci.ericsson.se or fax it at: +91 11 6187878. In case of any queries, please contact Girish Johar, Vice President-People and Culture at +91 11 6701507. Should you desire, you may also speak with ECI/MD Jan Campbell on +91 11 6701360.

ERICSSON

Intranet - http://india.ericsson.se/

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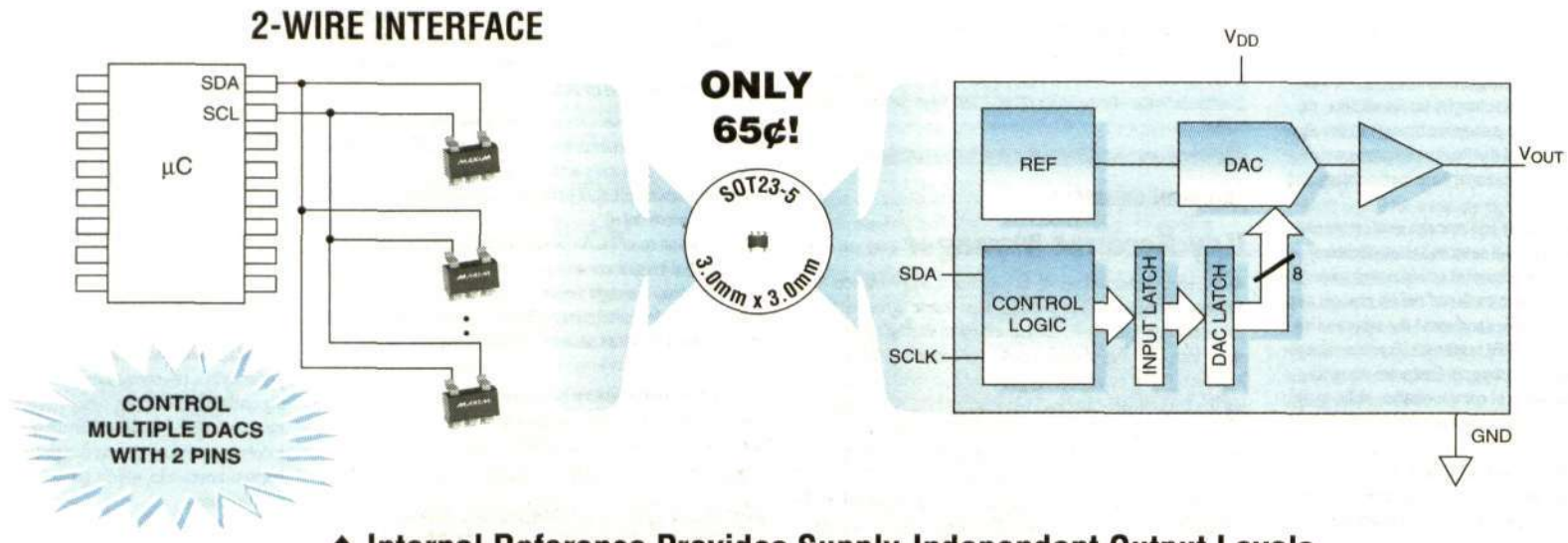

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Choose Maxim for Your SOT DAC Needs!

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MAX5381	8	+4.0	+4.5 to +5.5	-40 to +85	5-SOT23	95¢
MAX5382	8	V_{DD}	+2.7 to +5.5	-40 to +85	5-SOT23	95¢
MAX5360	6	+2.0	+2.7 to +3.6	-40 to +85	5-SOT23	65¢
MAX5361	6	+4.0	+4.5 to +5.5	-40 to +85	5-SOT23	65¢
MAX5362	6	V_{DD}	+2.7 to +5.5	-40 to +85	5-SOT23	65¢

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The art of balance sheets

➤ Can a company's income statement be expressed as a work of art? Perhaps profits can be expressed in crochet? Can building bricks be used to show fixed assets? Students at the Kristoffer School in Stockholm seem to think so. In January, they are putting on an unusual exhibition at the Folk Opera in the Swedish capital.

The students have transformed the balance sheets of listed companies into art. Educational consultants from a company called Bonanza assisted them in this project and provided a pedagogical method for financial reporting based on showing results using colors and images, rather than rows and columns.

The idea for the exhibition was conceived jointly by Bonanza and the students during a lecture. The students let their fantasies flow. Construction company Skanska's balance sheet, for example, is depicted using Lego bricks, while chocolate manufacturer Cloetta's is portrayed using candy. Ericsson is also represented in an oil painting and with painted circuit boards.

The idea is that the students will sell their creations to the respective companies after the exhibition. All proceeds will be donated to SOS Children's Villages and a school in Lembang, Indonesia.

Jesper Mott
jesper.mott@lme.ericsson.se

Photo: Magnus Jönsson

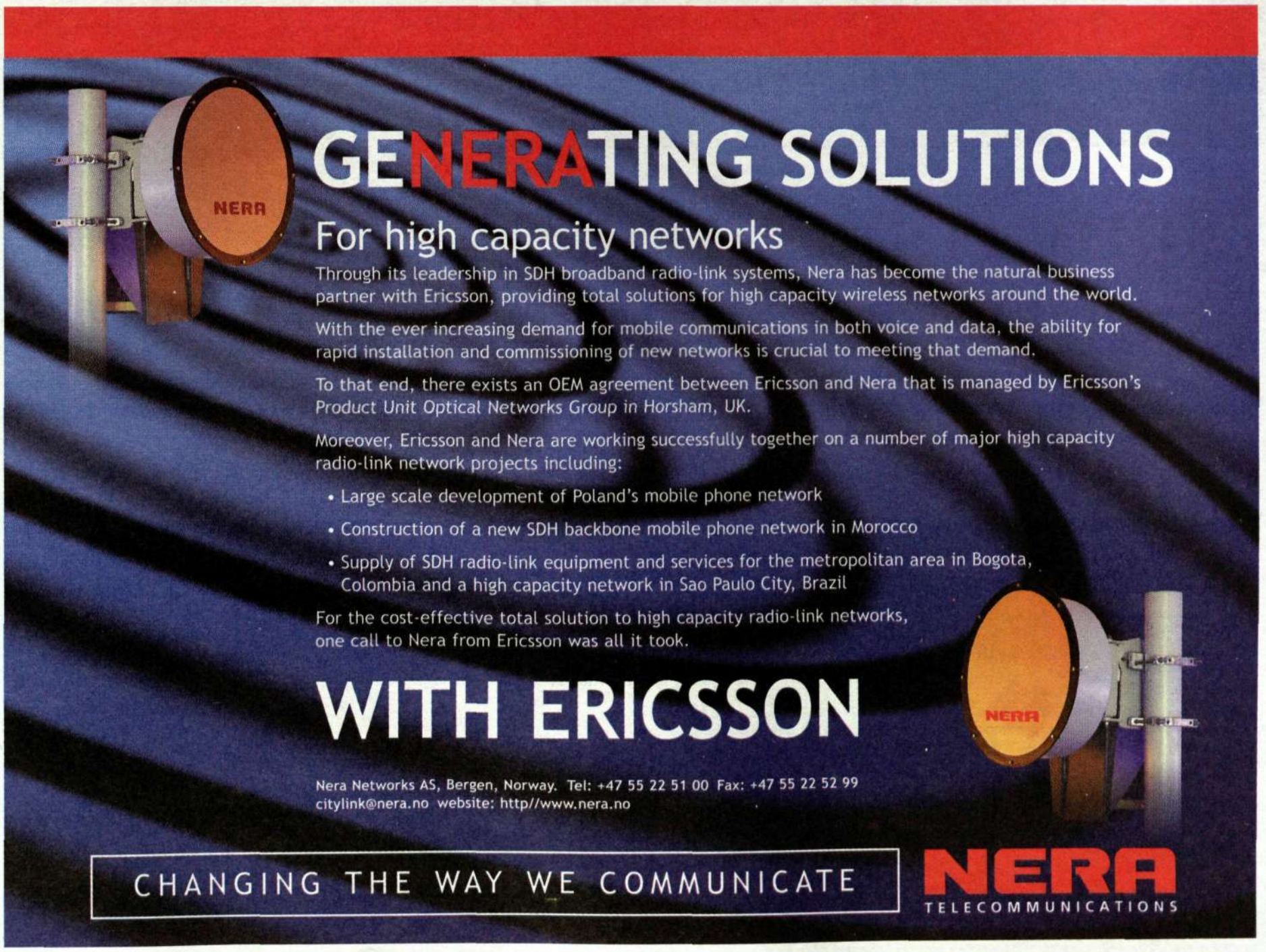
ERIC & SON

T28 World – the movie star

➤➤ At the 58th Annual Golden Globe Awards at Hollywood's Beverly Hilton Hotel, January 21, Ericsson was part of the backstage festivities. Ericsson was providing T28 World phones to all 60 award presenters, who include Tom Cruise, Denzel Washington, Edie Falco and James Gandolfini from The Sopranos. The Golden Globes, presented by the Hollywood Foreign Press Association, are considered easy indicators of Oscar nominations.

Julia Roberts won a Golden Globe for Erin Brockovich. Will she also win an Oscarfor the same role? The Oscar nominations are due in February.

On a related note: The T28 World is also on tour with the Backstreet Boys. The group expressed interest in Ericsson products while at the MTV European Music Awards. The Backstreet Boys will launch a world tour in February and will use the T28 World on the road.



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The more cooks, the better the broth – if the gentlemen of the Baghdad Gourmet Society are to be believed. Here Christer Hedberg and Bernt Lindström are testing Västerbotten Cheese Soup for the first time.

Photo: Jesper Mott

Many cooks make world-class broth

Once a year, members of the Baghdad Gourmet Society meet to devote themselves to the fine art of cooking. The Baghdad society was founded in 1983 by three Swedes from Ericsson conducting an international assignment in the city. Today there are 14 active members.

➤ Christer Hedberg has been involved in the society since its inception in Iraq. Today he resides in Sweden and the gathering in 2000 was held at his home in Åkersberga, just north of Stockholm.

Together with him in the kitchen are Bernt Lindström, who works in India, Tommy Comstedt, stationed in the US, and Kjell Liljegren who works in Singapore, although no longer for Ericsson.

Christer Hedberg explains how it all got started.

"Ericsson had several bachelors living in Iraq at the time and working extremely hard. Lars-Erik Wihlborg came up with the idea of creating a cooking club for Ericsson Swedes. The idea was to refrain from working one night a week," says Hedberg.

Over the years, routines have changed. Today, the Baghdad Gourmet Society meets once a year to hold what it calls the Cookvention. The members are all good friends and they don't want the society to become too large. People who are nominated as members must first pass certain tests.

"If someone is interested he'll have to work as a sandwich boy and do simpler tasks for a year. Then he has to prepare a dinner, which serves as a kind of apprentice test. At least four cooks must be invited to a five-course dinner. He has to prepare everything himself and if all goes well, he can be elected a society member at the annual meeting the following year," says Bernt Lindström.

Assembling four cooks for the dinner can be a challenge for the sandwich boy, since they reside in various parts of the world. Furthermore, the cooks are very demanding in their dinner evaluations. Several candidates have actually failed the test.

FACTS/**MENU 2000**

Hors d'oeuvres: Shrimp skewers with shredded paprika. Cucumber slices with whitefish roe and a dip sauce made of mustard and cottage cheese. Served with appropriate drinks.
Appetizer: Västerbotten Soup made with cheese, white wine and crème fraiche. Served together with a dry sherry.
Main course: Chicken fillets garnished with tiger shrimp and served with a rice timbale and saffron sauce. Served together with a Mexican Cabernet Sauvignon.
Dessert: Galliano parfait.

The cooks are very careful during their preparations in the kitchen in Åkersberga. At every Cookvention, at least one dish must be served that has never been made before. This time the maiden dish is a soup whose main ingredient is Swedish Västerbotten cheese.

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UPCOMING

January 25–26: The Western Europe Region of the Internet Applications and Solutions Division will hold its quarterly meeting.

January 26: Ericsson's issues year-end report for 2000.

February 20–23: The GSM World Congress 2001 will be held in Cannes, France. As in the past, Ericsson will be there with lecturers, exhibitions and a large customer seminar.

March 20–22: The CTIA trade show will be held in Las Vegas. Some 700 exhibitors and 30,000 visitors are expected to attend.

March 23–28: The world's largest telecom and IT trade show, CeBIT, will be held in Hanover, Germany.

inside.ericsson.se/cebit01/

UPDATES

On **January 1**, 2001, the GSM Pro unit moved to Special Business Operations from the Mobile Systems Division. Tore Smedman has been named head of the unit.

Ericsson Cables AB has changed its name to Ericsson Network Technologies.

NEW ASSIGNMENTS

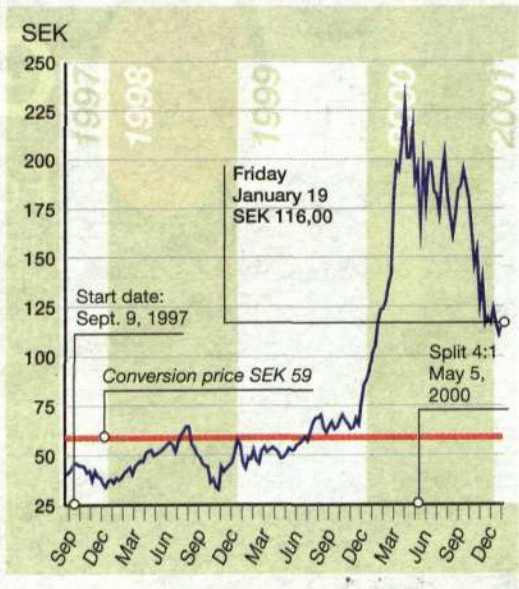
Reidar Braathen has been assigned head of Ericsson in Botswana.

Mats Granryd has been named head of Ericsson in Egypt, a position he will assume on March 15, 2001.

Jan-Olov Winnberg, Ericsson Microwave Systems, has been appointed senior expert within the Radar Systems field.

Per Willars, Ericsson Radio Systems, has been named Expert within UTRAN Architecture and Functions.

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