Pocket-size company

The new cordless phone DT 570 is designed specifically for users on the move, who make and receive many calls – in other words, the typical modern professional. **News, 4**

Vodafone enters China

Vodafone will be the first foreign operator to gain entry to the gigantic Chinese wireless market, after acquiring 2.6 percent of China Mobile for USD 2.4 billion. **World Watch, 11**

Fighting for frequencies

The world is running out of available radio frequencies. As broadcast technology evolves, the spectrum feels the strain. Ericsson is now part of an EU financed project to make better use of the limited capacity. **News, 5**

contact

143.50

Ericsson B share, Stockholm 13/10

■ NO. 16 · OCTOBER 19 2000

Three consecutive years of bad harvests have led to a direct threat of famine in Tadzhikistan. Selling whatever crops have grown has not alleviated the many problems the country faces: for instance, a whole bucket of fruit fetches just a dollar. Photo: Stig Lindström

Staying one step ahead of human disasters

More than two million people are on the verge of starvation in Tadzhikistan. Working within the framework for the corporate program for disaster relief, Ericsson Response, Stig Lindström has helped the Red Cross evaluate their communications resources for the relief effort. **13**

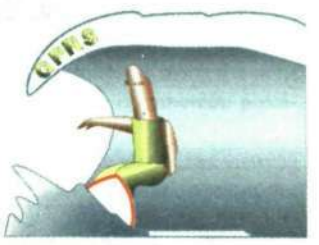
China goes mobile crazy

The market for mobile systems is expanding again in China. The total number of mobile subscribers is increasing by 2.5 million users per month. New mobile data services are also attracting users. The Guangdong Mobile Communications Company recently launched China's largest pre-commercial GPRS network, which was supplied by Ericsson. **News, 4**

Smart phone in shops now

Ericsson's most advanced mobile phone, the R380, is now available in retail stores. The phone packs a multitude of features, such as a WAP browser, built-in calendar, e-mail synchronization and a security program. **News, 4**

A wave about to break



The commercial kick-off is scheduled for 2001. Then we can watch the GPRS wave sweep the entire world. Contact lists the contracts and checks out the latest developments. **16–17**

Busy days in Germany

Auctions for the new 3G licenses are underway throughout Europe. The German operators had their turn in August. This has led to frantic activity at the Ericsson office in Germany, as negotiations take place with all six operators. The first contracts are expected at any time. **18–20**

■ DON'T MISS

Don't be afraid to asq

When crucial information just can't be found, ASQ & Global Business Systems is there to help. Each month, thousands of questions are answered by the staff working 24 hours a day, every day of the year. With the web as their main tool, Lars Bergqvist, Anders Ödman, Elisabeth Lindblad and their colleagues are Ericsson's knowledge detectives. **15**

■ NEWS

New times for HF

The sale of Ericsson's headquarters in Stockholm, HF, is now complete. The venerable property will be transformed into a new corporate campus area. **5**

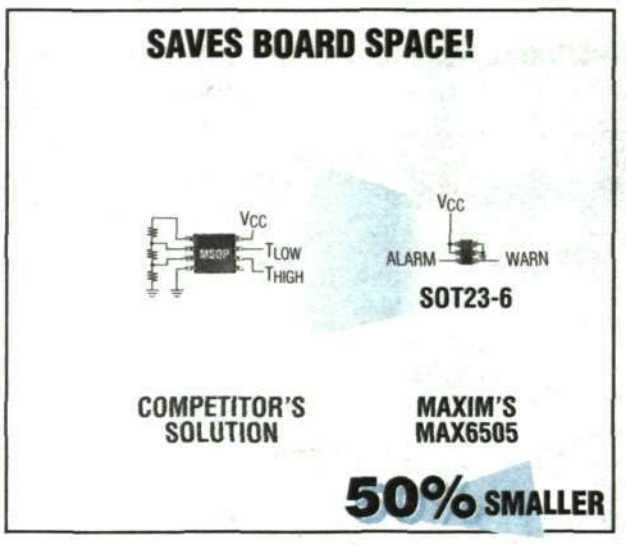
■ WORLD WATCH

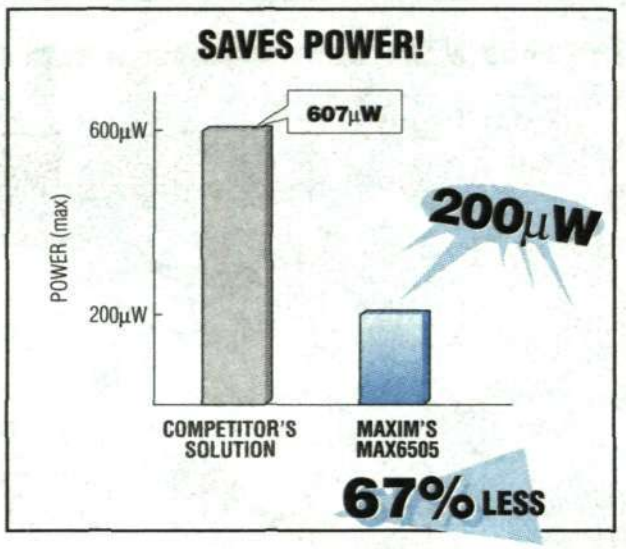
Behind I-mode

Ten million users and 50,000 new subscribers daily. That is Japan's enormously successful version of mobile Internet in a nutshell. Behind this success story lies one woman. **11**

DUAL TEMPERATURE COMPARATORS SLASH BOARD SPACE BY 50% AND POWER BY 67%

Factory Programmed: No External Components Required to Set Temperature Thresholds





- **SOT23 Package**
- **Low Power (30µA @ 2.5V)**
- **Two Temperature Comparator Outputs**
- **Factory-Set Trip Temperatures from -40°C to +125°C in 5°C Increments**
- **±0.5°C (typ) Threshold Accuracy, ±3°C (max), ±5.5°C (max) over Specified Temperature Ranges**
- **2.5V to 5.5V Operation**

The MAX6505/MAX6506/MAX6507/MAX6508 family of products combines two temperature comparators on a single chip, making control, warning, and protection functions even easier to build into your system.

The MAX6505 and MAX6506 have two logic outputs, each corresponding to a different temperature. The outputs become active when temperature rises above factory-programmed thresholds. The difference between the two temperature thresholds is pin-selectable to 5°C, 10°C, 20°C, or 30°C.

The MAX6507 and MAX6508 are ideal for maintaining a precise window of temperature to ensure optimum system performance. One logic output indicates when the system is within the desired operating temperature range. A second output indicates that the upper limit of the temperature window has been exceeded. Hysteresis for the two outputs is pin selectable to 2°C or 10°C. Available with open-drain or push-pull outputs, these temperature switches operate from 2.5V to 5.5V supplies and are available in a 6-pin SOT23 package.

FREE* Temp Sensors Design Guide—*Sent Within 24 Hours!

Includes: Reply Cards for Free Samples and Data Sheets

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

MAXIM
www.maxim-ic.com

2000 EDITION!
FREE FULL-LINE DATA CATALOG ON CD-ROM

Distributed by Maxim Distribution, Arrow, Avnet Electronics Marketing, CAM RPC, Digi-Key, Elmo, Nu Horizons, and Zeus.
Distributed in Canada by Arrow, and Avnet Electronics Marketing.

Austria, Maxim GmbH (Deutschland); **Belgium,** Master Chips; **Czech Republic,** Spezial-Electronic KG; **Denmark,** Arrow Denmark A/S; **Finland,** ACTE NC Finland Oy; **France,** Maxim France, Distributors: Maxim Distribution, Dimacel Composants; **Germany,** Maxim GmbH, Distributors: Maxim Distribution, SE Spezial-Electronic GmbH; **Ireland,** FMG Electronics; **Italy,** *Maxim Italy, Distributor: Esco Italiana S.p.A*; **Netherlands,** *Getronics Telecom Solutions B.V.*; **Norway,** *ACTE Norway AS*; **Poland,** *SE Spezial Electronic Spolka Z.O.O.*; **Portugal,** Avnet-ADM Electronics, S.A.; **Russia,** SE Spezial-Electronic ZAO; **Spain,** Maxim Distribución, Avnet-ADM Electronics, S.A.; **Sweden,** Maxim Sweden, Egevo Elektronik AB; **Switzerland,** Maxim Integrated Products Switzerland AG; **U.K.,** Maxim Integrated Products (U.K.), Ltd., Distributors: Maxim Distribution (U.K.), Ltd., 2001 Electronic Components, Eurodis HB Electronics; **Ukraine,** Spezial-Electronic KG.

MAXIM is a registered trademark of Maxim Integrated Products. © 2000 Maxim Integrated Products.

Success derived from curiosity and judgement

Technical curiosity, the courage to try something new, and the ability to think in the right terms and understand how an idea will take shape once it's finalized – these are the components of success, according to Ericsson's Senior Vice President, Technology, Jan Uddenfeldt.

"Broadband will elevate mobile telephony to unimaginable heights," explain Per Bergsten, Magnus Ewerbring, Jan Uddenfeldt, Håkan Djuphammar and Martin Angels, seen here in 1997, after the announcement that Ericsson had received thumbs-up for WCDMA from Japanese operator NTT DoCoMo.

➤ The 3G system is on the threshold, as licenses are being auctioned off at astronomical prices and new mobile services are being created at a rapid pace. In this context, it can be easy to forget that GSM, broadband and Internet were largely unfamiliar concepts a mere ten years ago. Not to mention the fact that Ericsson has played a large role in writing the history within these areas.

When Ericsson Radio began developing digital mobile telephony in the late 1970s, new inroads had to be created, both technically and politically. It wasn't an easy task telling the massive European telecom monopolies what to do.

But the pioneers at Ericsson Radio saw that there was a theoretical possibility to create digital mobile systems with TDMA technology that would have better capacity than the existing analog systems. In the end, they triumphed over both the political resistance and the difficulties of the radio medium itself, which would have to function on mobile terminals.

"It was a valuable learning experience to have to create new technology from the bottom up and in the end, it gave us an unbelievable level of expertise, both technically and in terms of running projects," says Jan Uddenfeldt.

Simplicity and complexity

"When it came to GSM, everything was very complex and we were involved at a very early stage," he adds. "An idea shouldn't be too simple and it often pays off to take a giant leap so that you take the lead over everyone else. At the same time, the idea can't be too complex and you shouldn't be too far ahead, just in case the idea proves to be wrong when the time comes to implement it."

As it turned out for Ericsson, success fed success. The legacy of GSM was a solid knowledge base and skilled staff that were prepared to take on new challenges, such as during the early '90s, when it was time to start developing the next generation with broadband, 3G. And GSM generated money that could be used for new research.

"We were at the forefront for 3G as well, and could see early on how to increase the number of voice calls per radio channel tenfold. We also saw how to increase data speeds by up to 2 Mbits per second with the new Wideband CDMA technology, which would be essential for the emerging Internet," Jan Uddenfeldt explains.

We have a tremendous number of skilled employees with good ideas.

Fight for 3G

The battle over the third-generation standard became a fight to the finish and Ericsson was up against most of the other system suppliers. Only Nokia supported WCDMA. But just as Ericsson collaborated with a major operator when it came to GSM, the company also joined forces with Japan's leading mobile operator, NTT DoCoMo, for 3G.

"And just as with 2G and GSM, common sense was the winner in the 3G struggle," Jan Uddenfeldt says.

"WCDMA is an excellent solution, both technically and financially, since it yields much higher capacity without requiring more base stations. Standardization efforts were also handled from a strictly technical perspective, especially in Europe and Japan, which have cultures that are largely based on logic."

Ericsson now has, thanks to a strong organization for research and development, a leading position when it comes to WCDMA, which will be operational in systems starting in 2001. Nor should one forget that second-generation systems such as GSM, TDMA and cdmaOne are still alive and well and undergoing development. Thanks to EDGE and cdma2000, these existing networks are now reaching for greater bandwidths.

But the era of major technical successes is far from over. There are currently many examples of entrepreneurship, such as Bluetooth, which started as an idea to eliminate the cord between the earpiece and the phone. It's all a matter of being in the right place and the right time, which Bluetooth is.

"We have a tremendous number of skilled employees with good ideas. Ericsson is leading the way when it comes to Voice over IP over Wireless, as well as mobile e-commerce. We also play a leading role when it comes to IP version 6. At Ericsson Research, there are also ideas concerning fourth-generation mobile systems, 4G. As such, Ericsson is an ideal place to work and an excellent school for the future," Jan Uddenfeldt emphasizes.

Sift the wheat from the chaff

He has reflected a great deal over what distinguishes success from disaster.

"It's good if the projects aren't too massive. The important thing is that the right skills are present and that the thinking is along the right lines, never forgetting the commercial possibilities of the idea.

"It's also a matter of nurturing ideas; viewing them as delicate plants that require proper care and envisioning their characteristics once they've grown. A good idea must also fall into the right hands. If the wrong person assumes responsibility or if the project size gets out of hand, even the best ideas fall into the grave," he concludes.

Lars Cederquist
lars.cederquist@lme.ericsson.se

contact

CORPORATE EDITOR, PUBLISHER
Lars-Göran Hedin, +46 8-719 98 68, lars-goran.hedin@lme.ericsson.se

SENIOR EDITOR
Henrik Nordh, +46 8-719 18 01
henrik.nordh@lme.ericsson.se

EDITORIAL STAFF
Lars Cederquist, +46 8-719 32 05
lars.cederquist@lme.ericsson.se
Jesper Mott, +46 8-719 70 32
jesper.mott@lme.ericsson.se
Ulrika Nybäck, +46 8-719 34 91
ulrika.nyback@lme.ericsson.se
Nils Sundström, +46 8-719 93 83
nils.sundstrom@lme.ericsson.se
Gunilla Tamm, +46 8-757 20 38
gunilla.tamm@lme.ericsson.se
Matthew Tapsell, +46 8-719 32 02
matthew.tapsell@lme.ericsson.se
Mia Widell, +46 8-719 41 09
mia.widell@lme.ericsson.se

PHOTOGRAPHY
Lars Åström, +46 8-719 93 31
lars.astrom@lme.ericsson.se

LAYOUT AND WEB DESIGN
Paues Media, +46 8-665 73 80

ADDRESS
Telefonaktiebolaget LM Ericsson,
HF/LME/DI
SE-126 25 Stockholm
fax +46 8-681 27 10
contact@lme.ericsson.se

DISTRIBUTION
Solveig Sjölund, +46 8-719 41 11
solveig.sjolund@lme.ericsson.se

EXTERNAL ADVERTISING
Display AB, +46 90-71 15 00

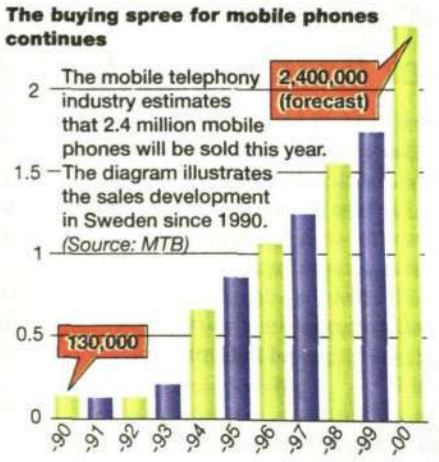
INTERNAL ADVERTISING AND VACANCIES
Suvi Nurmi, +46 8-719 10 58
suvi.nurmi@lme.ericsson.se

PRINTED AT
Nerikes Allehanda Tryck,
Örebro, 2000

CONTACT ON THE WEB:
http://inside.ericsson.se/infocenter
http://www.ericsson.se/infocenter

DID YOU KNOW THAT...

The buying spree for mobile phones continues



Ericsson brings WAP to enterprises

>> Ericsson has launched the enterprise Wireless Application Protocol (WAP) Gateway, which allows enterprises to bring mobile e-commerce services to their customers. It also provides mobile office users access to corporate intranet resources.

"The WAP Gateway offers huge business potential as a building block for partners who want to provide customized solutions, "said Mats Victorin, Marketing Director, Ericsson Enterprise. "Banking including stock trading, travel requirements like ticketing and even gambling and betting can be mobile based."

With specially designed applications the WAP Gateway can support virtually anything mobile office users want to do which requires real-time access to corporate intranet services. It creates opportunities for mobile offices by providing mobile users with access to corporate directories, calendars, news services, and e-mail.

Interim report for New York analysts

>> On October 20, Ericsson will hold a conference for New York analysts and the press to present the company's interim report for the first nine months.

The conference will be held at the venerable Waldorf Astoria Hotel on Park Avenue.

"The US investment market is extremely important for Ericsson, and we are therefore going to hold some press conferences in New York," reports Pia Gideon, executive vice president of press relations at Ericsson.

At present, 33 percent of Ericsson's shareholders are in the US.

Playground to open on mobile Internet

>> Playground is the name of Norway's first forum and idea exchange for the mobile Internet. Ericsson is taking the initiative in starting the forum, which currently consists 16 companies, including Avenir, TV2 Interaktiv and Birdstep Fast.

The objectives are to speed up development of the mobile Internet in Norway and to promote closer cooperation in the development of terminals, software and services.

Tests of mobile applications will take place in Ericsson's newly opened Mobile Internet Studio in Asker.

"The studio itself is a toolbox for Playground. It will provide all the facilities that members need to realize applications and services for the mobile Internet," says Blekeli Spiten, manager for Playground.

Web radio for fixed networks

>> The Multi-Service Networks division is expanding its news service on the intranet with web radio.

The new service will provide employees with weekly summaries from Ericsson and the industry.

The division also provides a multimedia magazine on the intranet, a printed newsletter and information via internal TV.

dmn.ericssson.se

First GPRS services in China

The Chinese market for mobile systems is growing rapidly. Guangdong Mobile Communications Company has selected Ericsson's GPRS system and is now launching China's largest pre-commercial network for packet data. By year-end, Chinese mobile subscribers are expected to exceed 70 million.

With packet-switched GPRS technology, GSM users will have access to higher data speeds for surfing the Internet, exchanging e-mail and sending images.

Guangdong Mobile Communications Company (GMCC), which is China's leading cellular operator, recently signed a contract with Ericsson for building out the GSM network in the province and upgrading it for GPRS.

The GPRS system currently provides coverage in Guangzhou and Shenzhen. Ericsson will be successively building out the network over the autumn and is supplying a total solution that includes both infrastructure and terminals.

"This will help our customers make a smooth transition to the mobile Internet age by enabling them to easily use the services that high-speed data allows," says Li Gang, President of GMCC, speaking at a recent demonstration of live GPRS services by Ericsson in Guangzhou.

This demonstration took place in conjunction with GMCC celebrating its ten millionth subscriber.

The framework agreement with GMCC is an indication that the market for mobile infrastructure is picking up again following a relatively low rate of investment in 1999. In September, Ericsson also signed a framework agreement with China Telecom Group Guangdong Corporation to build out the next-generation fixed telephone network in the province.

The total value of these two framework agreements is USD 500 million.

The number of mobile subscribers in China is increasing by a total of about 2.5 million each month. The growth rate is increasing steadily, and in three or four years, estimates indicate that there will be more than 250 million cell phone users in China.

Nils Sundström
nils.sundstrom@lme.ericsson.se

Mobile networks are expanding rapidly in China. Some 2.5 million new subscribers sign up each month. Ericsson is now building China's largest GPRS network in the Guangdong province. Photo: Lars Åström

The company in your pocket

DT570 is Ericsson's new cordless DECT phone for the mobile office. It was designed for users who are mobile, and make and receive many calls.

The new phone has a large display and an easily navigated menu system. The built-in telephone book can store 100 numbers entered by the user plus 1,000 extensions that are entered centrally via the company's PBX. Because few workplaces have more than 1,000 employees, most DT570 users can carry the entire company phone book with them in their pocket.

A user-friendly call-forwarding menu makes it easy to divert calls without programming codes. Indicating that you are out to lunch, for example, requires only selecting the alternative "Lunch" and entering the time at which you will return. It is also easy to determine if calls are being diverted and if so, to what number.

Caller identification shows the caller's number or name, if the number is found in the phone book. If the person you are calling has diverted his or her calls, this is indicated on the phone. The DT570 also provides information about incoming calls if they are being diverted to you. This is useful for secretaries, for example, who often receive calls forwarded from others.

There is a function for text messages that allows messages to be sent from the Internet or and intranet to the DT570. This is ideal if you are sitting in a meeting but still want important information to reach you. Text messages can be received, even if you are talking on the phone.

"The best way to market the DT570 is to refer to those who already use it. We have tested it in our own unit and conducted a number of field trials with various customers. Everyone is very pleased with the telephone's functions, particularly the simple and intuitive call forwarding system," says Paul Eggen, product manager for Business Cordless Telephony at Ericsson Enterprise.

The new phone is compatible with the GAP/CAP standards, meaning that it is fully interoperable with Ericsson's BusinessPhone and MD110 business switches, as well as those from other suppliers.

The new DT570 DECT cordless phone has many features and an easily navigated menu system.

Ericsson offers a wide range of accessories for the DT570, including various types of headsets, clips, cases, chargers and a desktop cradle with a loudspeaker function.

Kari Malmström
freelance journalist

Wireless giants agree on positioning

Ericsson, Nokia and Motorola are joining forces to create a common standard for positioning for wireless networks. The first products based on the new standard are expected to be available on the market next year.

Positioning is expected to be a significant service segment within mobile Internet. Users should be able to find stores and restaurants, for example, with a few key presses.

The technology can also be used by rescue services to locate persons making emergency calls.

Today there are several technologies for this purpose but no full-fledged standard. To jump-start the market, Ericsson, Nokia and Motorola are creating the Location Interoperability Forum (LIF), whose members will be a mix of operators, suppliers and application developers.

"This is primarily a consortium that will create a working standard with an interface that will allow application developers to use positioning information," says Stig Rune Johansson, technical manager at the Mobile Systems division.

"Today there are a total of four standardized techniques for obtaining positioning data. The problem is that positioning services are unique for each wireless network and position system," Rune Johansson continues.

Ericsson has developed the Mobile Positioning System, which already works with existing mobile phones. By adding new functions, accuracy can be improved.

By providing open interfaces as standardized by LIF, applications will be able to function identically in systems from different suppliers.

With regard to terminal-based positioning methods, from 2001, telephones in the US must be able to be located with an accuracy of 50 meters, while the figure for network-based methods is 100 meters.

Nils Sundström

www.locationforum.org

Classic head office to get new look

Ericsson's classic head offices and production plant at Telefonplan, Stockholm have been sold to AP Properties for SEK 800 million (approxemately USD 80 million), thus completing the sale of all Ericsson properties in Sweden. The new owner will transform Telefonplan to a modern campus environment.

Ericsson is selling its head office at Telefonplan, Stockholm, to AP Properties. Photo: Patrik Lindén

"Together we will create a modern corporate center that provides the right conditions for development of advanced data and telecommunications products," says Per-Håkan Westin, president of AP Properties, which recently purchased the Ericsson HF property at Telefonplan.

All Swedish properties sold

The sale is a part of Ericsson's strategy of focusing on core business. The sale of all properties and surrounding land areas owned by Ericsson worldwide is expected to result in a net of approximately USD one billion.

With the sale of the property at Telefonplan, all Ericsson properties in Sweden have been sold. By the first quarter of 2001, the sale of all properties in the rest of the world will be completed.

"The sale also includes a re-leasing agreement, meaning that there will be no significant changes in our operations. The changes that will result from the sale of the property at Telefonplan, for example, will allow the creation of new premises with new values for Ericsson," says Jesper Svensson, operationally responsible for the property sales.

Dynamic center

A new age awaits the head office at Telefonplan, which is important for Ericsson's image.

"With AP Properties, we will create a dynamic center, more closely integrated with the surrounding community. The idea is to divide the area up into blocks and to open it up for other companies, stores and restaurants," says Cecilia de Besche, who is working on design of the new corporate campus. Telefonplan will remain the primary location for the parent company LME.

Business Innovation will also consolidate its operations at Telefonplan.

Nils Sundström
nils.sundstrom@lme.ericsson.se

Prizing open the frequency spectrum

A new technique will make it possible to better utilize the limited frequency spectrum. Ericsson is coordinating an EU project that will combine different access techniques, such as GPRS, WCDMA, WLAN, digital video and audio broadcasting in a dynamically shared frequency range.

Currently, the frequency spectrum is assigned to specific services. The WCDMA network, for example, uses the 2 GHz band, while TV uses 470 to 862 MHz.

"We are now testing different methods for dynamic frequency allocation so that we can borrow spectrum from different frequency bands to enable broadband mobile multimedia services," says Ralf Tönjes, project manager at Ericsson Eurolan in Aachen, which is coordinating the research project.

Better support

The future scenario is a user who has interactive broadband access to in-car multimedia services at reasonable costs.

The lack of frequency resources will be tackled by implementing special optimization and coordination techniques which support the provisioning of mobile services via the best available access network. Mobile terminals can then choose optimum access for in-car communication applications.

Many applications like Web browsing exhibit an asymmetric traffic load. The research project will provide a better support for asymmetric services, especially in the 3G mobile systems, UMTS.

"The allocation of UMTS frequencies by the regulatory bodies took almost twenty years. The dynamic spectrum allocation techniques developed by this project will speed up the innovation cycle for future systems," says Ralf Tönjes.

EU supported

The research project, which is called Dynamic Radio for IP Services in Vehicular Environments (DRiVE), is supported by the EU. In addition to Ericsson, a number of other companies are participating in the project, including the BBC, Bertelsmann, Bosch, Daimler-Chrysler, Nokia, Teracom and Vodafone. The research project has also established cooperation with a number of standards bodies.

The DRiVE project is scheduled within a timeframe of two years and may have an impact on future planning by frequency allocation authorities.

"The technology can be standardized and ready for commercial use by 2010," says Ralf Tönjes.

Nils Sundström

www.comnets.rwth aachen.de/~drive

Multek takes over Kumla PCB center

Ericsson recently signed a memorandum of understanding with the US company Multek regarding the sale of the Printer Circuit Technology Center in Kumla.

The center's 300 employees are being offered jobs with the new owner. The sale is a part of Ericsson's continued focus on core business.

Multek is a wholly owned subsidiary of Flextronics International, which in turn has acquired a number of Ericsson production units since 1997.

Multek is a global manufacturer of advanced printed circuits, a segment in which the company is the market leader.

"The production unit in Kumla will further strengthen our position as the leading supplier of printed circuits for the data and telecom industry," says Multek's President Steve Schlepp.

"The sale of the printed circuit unit in Kumla is part of an ongoing process within Ericsson of continuously reviewing operations," says Björn Boström, Executive Vice President for corporate Supply and IT at Ericsson.

Jesper Mott
jesper.mott@lme.ericsson.se

Investor office opening in London

» Ericsson is opening a new department for investor relations in London.

The London office will supplement existing departments in Stockholm and New York.

"The financial markets are increasingly focusing on telecom companies, and Ericsson has to live up to increasing demands for a dialogue with investors," says Sten Fornell, Executive Vice President of Finance at Ericsson.

Contacts with international investors are handled by Gary Pinkham, who is head of investor relations in New York.

Lotta Wiklund is the first person recruited to the new department in London.

World debut for new billing system

» Finnish operator Suomen 3P Oy has selected a new billing system from EHPT.

This is the world's first delivery of a billing system for 3G customers. The system is designed to aggregate and process traffic charges for both the wireless and the backbone network.

EHPT is jointly owned by Ericsson and Hewlett-Packard.

Wireless modules to Israel

» The Israeli company Matan is using Ericsson's wireless modules in its new positioning system for vehicles.

The GM22 and GM25 wireless modules are being installed in vehicles.

Matan states that Ericsson products were chosen because they are reliable and easy to install.

Photo: Lars Åström

Wireless wallet award nominee

» Wireless Wallet, Ericsson's intelligent solution for wireless payment, was nominated as one of the best technical innovations for the Sesame Award.

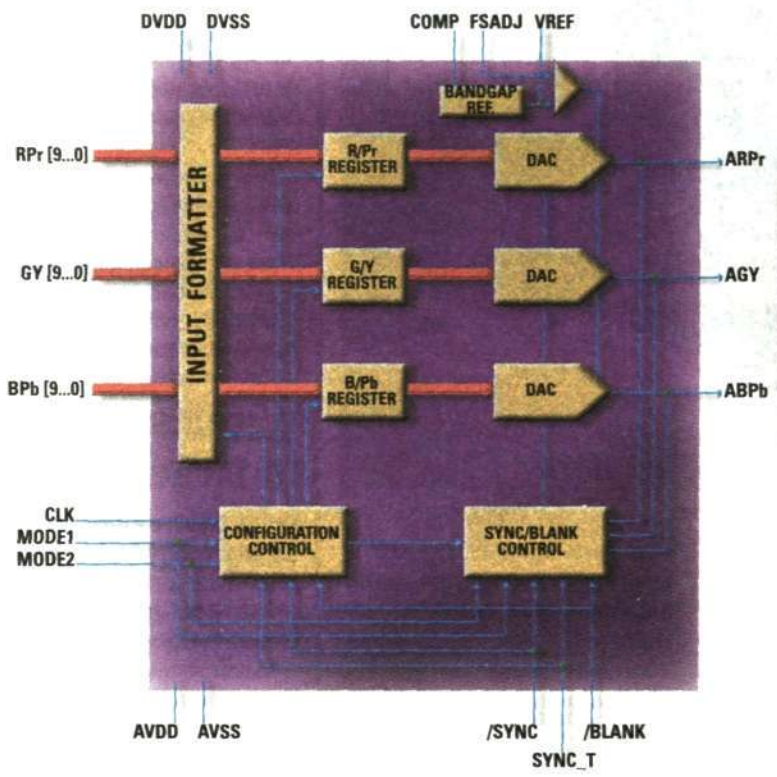
This prize is awarded each year at the Cartes exhibition in Paris, which is the largest international forum for smart card technology.

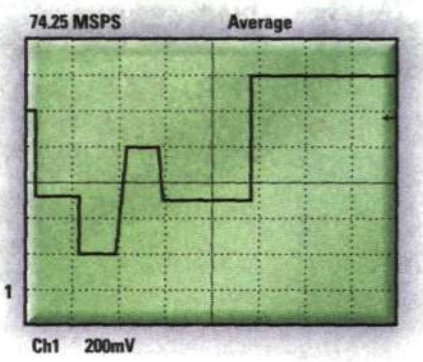
Wireless Wallet looks like an ordinary wallet but contains a smart card reader for the user's cards.Tests of the concept are in progress with credit card issuer Visa and other companies.

With Bluetooth technology, users can use a WAP phone, for example, and pay for goods or services using the Wireless Wallet. A personal PIN code is used to access the Wireless Wallet.

The winner of the award will be announced on October 24.

Industry's first HDTV-compliant DACs.





- *Triple, 10-bit (THS8133B) or 8-bit (THS8134B) DACs with 80-MSPS sampling rate*
- *5-V analog supply and 3- to 5-V digital supply operation*
- *Direct drive of doubly terminated 75-Ω load into standard video levels*
- *Bilevel (SDTV) or trilevel (HDTV) sync generation with 7:3 video/sync ratio*
- *ITU.BT-656-compliant multiplexed YPbPr/GBR input modes with support for 4:4:4 and 4:2:2 sampling formats*
- *Evaluation module with reference design for sync timing generation of HDTV formats*
- *THS8133B from only $8.66, THS8134B from only $6.62 per device in quantities of 1,000*

In production since June 1999, the THS8133B and THS8134B from Texas Instruments are the industry's first DACs with HDTV sync. They are also the first DACs to be compliant with SMPTE 274M/296M and EIA/CEMA 770-3 standards for HDTV. The integration of trilevel sync generation within the DAC reduces component count and design complexity and saves board space. The THS8133B/34B can also generate bilevel sync required for NTSC and PAL and are suited for applications including medical imaging, desktop publishing and DTV. The THS8133B/34B are two powerful devices in TI's growing video product line.

48-pin TQFP shown actual size

Evaluation Module (EVM)

Contact us to request:
free product samples
data sheets
EVMs

www.ti.com/sc/hdtvdacs

+44 - 1604 - 66 33 99 (Europe)

1 - 800 - 477 - 8924 (North America)

+ 886 - 2 - 23786800 (Asia)

The red/black banner is a trademark of Texas Instruments. 0895-22WW AAP9123E

© 2000 TI

THE WORLD LEADER IN DSP AND ANALOG

TEXAS INSTRUMENTS

World's smartest phone hits the market

The wireless world's latest wonder has been available in stores for the past few weeks. Ericsson's R380 phone is the first in a new family of smartphones.

At first glance, the R380 looks like an ordinary mobile phone. But when you flip open the front panel, you are greeted by a touch screen equipped with tools that combine a mobile communications device with the functions normally found on a PDA.

The functions found on the R380, combined with its user-friendliness and screen size, make the phone the world's first true mobile Internet product, according to Jon Brännström, head of marketing for smartphones and communicators.

"The telephone was most recently demonstrated for over 100 journalists from around the world at Ericsson's Mobile Technology Summit in London in the middle of September. Reaction was very positive," he says.

The R380 recently started reaching retailers in the Nordic countries, the UK and the Middle East. By the middle of October, it will be available in all Western European countries as well as the larger markets in Asia.

At the moment, they are still hard to find in stores since Ericsson made the decision to begin shipping as soon as the phones went into production. Production levels will be incrementally increased at the plants in Linköping and Bilbao.

"It was important to get the phone out as soon as possible, since it is partially aimed at companies who will be developing applications for it. These include mobile banking and e-commerce services as well as entertainment, news and media services," says Jon Brännström.

"Interest from suppliers of applications and services has been strong. They consider the R380 to be an outstanding tool for more advanced, interactive WAP-based services."

The R380 is aimed primarily at what he calls "mobile professionals," people who are on the go in their work and who spend a great deal of time communicating with colleagues, customers and others. The phone is also ideal for people who travel frequently and who need to access their company's intranet.

Key features include a built-in calendar and e-mail synchronization. The phone also includes a WAP reader, a notepad and a security program to access password-protected networks (see related article).

What distinguishes the R380 from most other WAP phones is its user-friendly interface and large screen, which allow for easy navigation, either using a finger or the pen included. Text can also be inputted using the screen-based keyboard or by writing directly on the screen with the pen included.

Henrika Lavonius-Norén
freelance journalist

www.ericsson.com/r380

Krister Ohlsson, Michael Öhman, Christian Lundgren, Johan Granbom and Matias Rugardt have turned the R380 into a powerful business tool. Photo: Anders Roth

Check e-mail over the phone

Now you can read your e-mail on your mobile phone. At least if you have the new R380 smartphone.

For the first time, it is now possible to access Ericsson's intranet using a mobile phone, thanks to a completely new security solution. In cooperation with RSA and Secure Computing, the R380 development team was able to incorporate a password generator that provides access to the intranet.

"Regardless of the country you are in, you will be able to access your e-mail using the phone. The R380 will become a tool to access the network outside the workplace," says Michael Öhman, head of intranet access for communicators and smartphones.

"The security solution is state-of-the-art and will undoubtedly be of interest to other companies as well."

With the R380, it will be easier to take the office with you in your pocket. Instead of having to use a laptop, a Racom device and a telephone to download e-mail over an external phone line, you will now be able to do so right from your phone.

In order to make it easier for Ericsson employees to get started using the new phone, the development team has put together special support services for the R380. If you have a problem or have questions on how to configure it, simply contact the Help Desk.

"It's important that the appropriate expertise exists within the internal support organization once we launch a new product. We've made sure that we've done just that with the R380," says Johan Granbom, group leader at IT Services.

When you are ready to configure your R380 for internal usage, call up the Help Desk and order Racom for R380. You will then receive the codes that are required to activate the built-in program and a special Ericsson installation guide and user manual.

You can also order software from the Help Desk to install on your computer, which will enable you to synchronize your phone with Outlook on your PC.

"The software is adapted to ESOE, so that it will function together with the other computer programs we use at Ericsson," says Krister Ohlsson, who works on certification at IT Services.

"The goal is for the phone to become a new work tool for Ericsson employees. We have to demonstrate that we practice what we preach, and not use third-party products. You can do everything you do on a Palm or a Psion with the R380. Moreover, you can do it with wireless access," says Michael Öhman.

Henrika Lavonius-Norén

Download the Ericsson edition of the user manual:
mes.ericsson.se

To activate the Racom card:
racom.ericsson.se

FACTS/R380

The R380 is Ericsson's first smartphone, incorporating a PDA and wireless phone into a single unit.
Underneath the fold-out keypad, a large screen reveals an address book, calendar, WAP reader, e-mail and password generator, allowing you to log on to your corporate intranet from outside the network.
The phone also contains a notepad function so that you can input information by writing on the screen – just like a PalmPilot.
Using a patch cord and special PC software, you can easily synchronize your phone with your calendar, e-mail and address book on your computer. This setup also enables you to make backup copies of information in your phone.

New services help operators

On October 25, the Global Services division will be gathering its forces in Stockholm to demonstrate its new service portfolio under the theme, "Making sense of the New Economy?"

Selling services to operators is becoming an important part of Ericsson's strategy to deliver complete solutions.

Telecom operators' business plans are changing with the convergence of telecom and datacom, developments in mobile Internet and new fixed networks. New competitors are entering the scene as are new business models.

Ericsson's focus on service sales has been part of the strategy at the highest level since the company's reorganization this past summer. Under the leadership of Bert Norberg, Global Services Division, with its 16,000 employees worldwide, will assist operators and service providers to be successful, in conjunction with Ericsson's other divisions.

A new, easier to understand product portfolio is now ready to solve the business needs of customers. It includes services and management solutions that run the gambit from consulting, operation and maintenance to planning, installation and development of customer expertise.

On October 25, the division will hold its first event in Stockholm. One thousand sales and marketing representatives from Europe and Asia have been invited. Similar meetings are planned for customers and employees in North and Latin America and in Hong Kong

Nils Sundström
nils.sundstrom@lme.ericsson.se

http://globalservices.ericsson.se/launch

HELLO THERE...

Marie Svensson

...who will start working as a strategic marketer for the new GSM, TDMA and EDGE Systems business unit. Marie's duties include creating a global picture of how 3G is developing and what is driving its development.

The new organization will involve closer collaboration between GSM and TDMA, which previously operated independently. How will you go about converging marketing activities for all of these various systems?
"Our goal is for operators to combine their technologies into something known as EDGE. It is a refinement of TDMA and GSM networks that enables them to meet the International Telecommunication Union's criteria for 3G".

"Together, we will build what will become the most used technology. All GSM and TDMA networks operating within the existing radio spectrum will be acquiring EDGE at some point in the future. But we are going to emphasize that the way to build markets goes via GPRS. There will be approximately 1 billion GPRS/EDGE users within four or five years. The technology itself is not as important. What's important is that we start using the mobile Internet".

You can compare this to the explosive growth that occurred within ordinary mobile telephony. We have probably not yet understood the magnitude of it all yet. What is your background?
"I've been doing this for the past two years, only just at TDMA. I am a technology economist with a marketing background. I've learned about the technology on the job".

When will EDGE phones reach consumers?
"They will be out in significant volumes by 2002, although some customers will be able to get them as soon as 2001".

What do you consider to be the greatest challenge in your job?
"Probably trying to link two worlds together – Asia and Europe with North and South America. It is a challenge to understand the needs of both sides. Retaining a global perspective while maintaining the importance of every individual customer".

Jesper Mott
jesper.mott@lme.ericsson.se

VoIP
now we're talking

Mitel Semiconductor solutions provide the networking technology behind the systems that interconnect the world. Our VoIP chip-set enables a complete solution, silicon to software, meeting the design challenges of IP Phones, including Trueplex echo cancellation, QoS and on-chip hardware accelerator for encryption.

MT92101/2 - IP PHONE PROCESSOR

Comprising an ARM7 TDMI™ RISC CPU, OAKDSPCore™ and full Ethernet 802.1p bridge, the MT92101/2 hosts the signalling stack, performs voice streaming and manages the prioritisation of voice over data packets in the network.

MT92303 - DUAL PHONE CODEC

Provides the phone-user interface and includes drivers for handset, headset, speakerphone and line.

MT933 - 3.3v ETHERNET PHY

A full 10/100 Ethernet Physical layer device which connects to the MT92101/2 processor via a Media-Independent Interface.

MEB92101/2 - EVALUATION KIT

includes all hardware and software needed to develop applications quickly and easily. Software includes H.323, SIP, MEGACO plus G.723.1 and G.729AB compression.

ARM POWERED

MITEL
SEMICONDUCTOR

www.miteisemi.com/new/VoIP
Tel: +44 (0) 1793 518528

Crucial piece in the puzzle

The new Data Backbone and Optical Networks (DBO) division launched its strategy in a recent employee meeting it called Fast Forward Together. The recent meeting in Stockholm was the first of a series that will cascade the message to all its division employees.

Although it began just two years ago as a business unit formed to bring data competence to Ericsson, the DBO division is now an extremely important element for Ericsson's success in becoming the leading provider of mobile Internet and multiservice networks.

Mike Thurk

"It is important to understand that we are an essential part of Ericsson. Data backbones, including network access, services, multiservice backbones and optical networks, are vital in making Ericsson one of the leaders in Mobile Internet and Multiservice Networks." These were the words of Mike Thurk, head of the Data Backbone and Optical Networks division, at the Fast Forward Together employee conference in Stockholm.

Test development

Some 800 persons from the Datacom Backbone and Optical Networks division gathered on September 18 to receive information about the division's goals and to discuss them. The most important message was that Ericsson's leadership depends on DBO's employees being regarded as essential; customer-driven and trusted partners of both internal and external customers.

Developments in this division have progressed at an extremely fast pace. Two years ago, Ericsson had no products launched in the data backbone product category. And the company used products from such competitors as Cisco to bring customers into the world of next-generation networks .

Now, the situation is completely different and the organization has grown to comprise about 2,500 persons, with some 1,000 more involved in such activities as the sale of IP products in the marketing units.

Ericsson now has a complete datacom product portfolio that has proven to be successful for operators.

"We will focus on securing contracts from customers who are major operators in key markets, where we can see that our solutions have high significance for the customer's future," Mike Thurk explains.

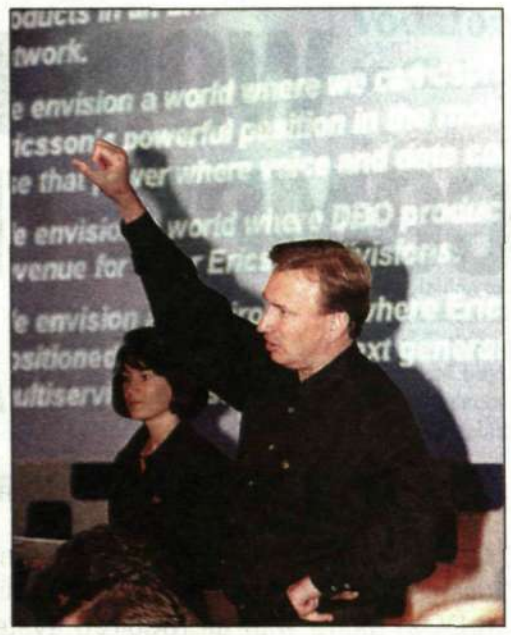
"We can see that we are winning against Cisco in procurements from operators, a factor we could not take for granted in the past," says Jean-Luc Abaziou, head of the product unit for IP backbone router development in Rockville, Maryland, in the US.

Not competing

At the same time, the division established that Ericsson does not intend to compete on Cisco's conditions, or those of any other competitor.

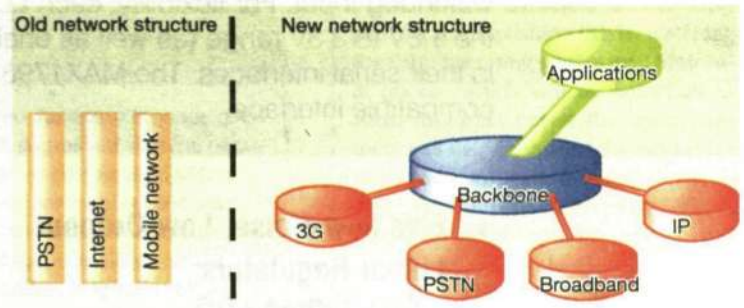
Ericsson's strength lies in its expertise in wireless and wireline networks and that it sells end-to-end solutions to major operators. The vision is for all products sold to our customers to be Ericsson-driven, whether it is in a fixed or mobile network.

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



Håkan Olson, head of the Optical Networks product unit, was one of the speakers at the Data Backbone and Optical Networks' internal conference in Stockholm.

Photo: Mia Widell Örnung



Ericsson's vision for the network of the future is that the wireline and mobile networks will grow together. Telecom and datacom are also growing together. The merger of these technologies will result in a joint backbone network for various kinds of access networks. In simple terms, the multiservice networks of the future can be organized in three parts: a backbone network, a control layer and a layer of servers, from which all applications can be retrieved. A call from a mobile phone are connected via the mobile network to the backbone network and retrieve their information from the servers that are largely the same for the entire network. The information is sent through the backbone network and through the access network to the user. Today, the networks are mainly independent of one another and each network has its own set of servers with services and information.

Striding towards multimedia over IP

A concentrated effort is now being made at Ericsson to develop IP-based multimedia services.

It is anticipated that an IP solution with multimedia applications for Engine will be ready next year and that a 3G multimedia solution will be available the year after that.

This development work will be conducted within an entirely new virtual product unit.

The product unit for IP telephony will now begin to develop IP-based multimedia, in accordance with a decision by the executive management team last week.

This product unit, which is part of the Data Backbone and Optical Networks, is a virtual organization that will work closely with both Mobile Systems and Multi-Service Networks.

IP telephony is key

Maria Khorsand

"We are taking this fast forward to multimedia. This is a market driven evolution, not a technology driven one," says Maria Khorsand, manager for the IP Telephony product unit.

IP telephony, and now even IP-based multimedia, are important technologies that will allow Ericsson to deliver total solutions for 3G and mobile Internet.

This is a strategically important development that shows that Ericsson is at the forefront of tomorrow's telecommunications world where everything will be based on IP and will continue to be the leader in voice, which is at the heart of telephony.

Operators already started

Already some 30 operators in 70 countries have installed Ericsson system for IP telephony in their networks.

DeltaThree in the US offers its customers free IP voice calls. Interoute is currently building out its own international IP network in which customers will be offered inexpensive long distance calls.

IP telephony offers telephony at lower cost than conventional circuit-switched telephony, but until now, voice quality has not been satisfactory.

Voice quality important

"Stability and voice quality are the most important factors right now. All of our teams in Oslo, Dallas and Stockholm are working to solve the problems with quality, and we have made considerable progress," says Maria Khorsand.

"We are seeing now that Ericsson is the leader in IP telephony solutions with high voice quality," she continues.

Next year, the unit expects to develop an IP solution for multimedia applications for Engine. A similar solution for 3G will be produced 2002.

"But we will start testing for 3G next year," concludes Maria Khorsand.

Mia Widell Örnung

Footnote: A router is a switch for Internet and IP-based traffic. It reads and guides IP packets in the network and determines what route is best for the packet to take.

FACTS/DATA BACKBONE AND OPTICAL NETWORKS

Head office: Boston

Number of employees: Approximately 2,500

Organization: Datacom Networks and IP Services was previously a business unit in the Operators segment. At mid-year 2000, DNIP was merged with Ericsson's optical networks operations to form a separate division, Data Backbone and Optical Networks, which consists of five product units and supports several functions – IP Telephony, Optical Networks, IP Network Edge and Access, IP Backbone Networks, and ATM Multiservice Networks.

Customers: Customers such as Omnipoint, BellSouth and AOL of the US, Swedish Telia, Spanish Telefónica, Finnish Sonera and KPN, have Ericsson's datacom products in their networks.

Competition: The three major competitors in the area are Cisco, Lucent and Nortel. In addition, Siemens, Alcatel, Nokia and Motorola are making themselves heard in the market.

GPRS router now ready

Ericsson's AXI 540 IP Edge Aggregation router has now been refined to be able to handle traffic in GPRS networks.

The IP router was originally developed for fixed networks and was therefore too large for GPRS networks – it now will be produced in a smaller version.

"The slimmed-down AXI 540 will be included in Ericsson's GPRS networks. Increases in production will be made very rapidly," says Jean-Luc Abaziou, head of the product unit for IP backbone router development in Rockville, Maryland, in the US.

The AXI 540 is an "aggregation router" for the outer edges of the wireline network. It is a high-speed router with carrier class characteristics, which means that it has the same resiliency that has been offered by the traditional telecom world.

The AXI 540 is also included in Ericsson's Engine solutions for IP over ATM and sales began in autumn 1999. It has now been further refined to be able to handle IP over the GPRS network. This creates new requirements, since the mobile network – the GPRS network – is involved. Requirements include new tunneling capabilities, and new physical interface.

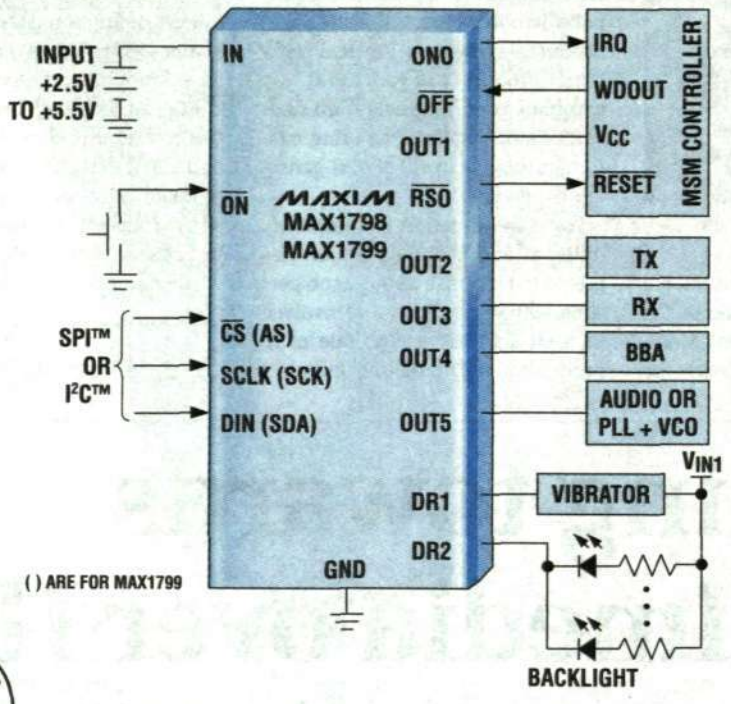
Mia Widell Örnung

WORLD'S SMALLEST COMPLETE POWER ICs FOR CDMA HANDSETS

Integrated Solutions Reduce Size, Design Time, and Cost

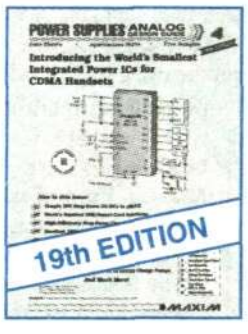
The MAX1798/MAX1799 system power supplies are designed specifically for CDMA cellular/PCS handsets using a variety of available CDMA chipsets. Each IC contains five low-noise, low-dropout linear regulators (LDOs) along with all required system-management functions, including a timed reset output and a watchdog input. For flexibility, each LDO's output voltage is independently programmable to any voltage in the 1.8V to 3.3V range (as well as enabled or disabled) via their serial interface. The two devices differ only in their serial interfaces. The MAX1798 features an SPI-compatible interface, while the MAX1799 has an I²C-compatible interface.

- **Five Low-Noise, Low-Dropout Linear Regulators**
  - **One 300mA LDO**
  - **Four 150mA LDOs**
  - **Low 100mV max Dropout**
  - **Excellent AC Specifications**
- **Two High-Current Open-Drain Driver Outputs**
- **Power-On Reset and Watchdog Functions**
- **Two Serial Interface Options:**
  - **3-Wire SPI-Compatible (MAX1798)**
  - **2-Wire I²C-Compatible (MAX1799)**
- **Compact 20-Pin Thermally Enhanced TSSOP Package**
- **Evaluation Kit Available (MAX1799EVKIT)**



SMALLEST SOLUTION

I²C is a trademark of Philips Corp.
SPI is a trademark of Motorola Inc.



FREE* Power Supplies Design Guide—*Sent Within 24 Hours!

Includes: Reply Cards for Free Samples and Data Sheets

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

MAXIM
www.maxim-ic.com

2000 EDITION!
FREE FULL-LINE DATA CATALOG ON CD-ROM

Distributed by Maxim Distribution, Arrow, Avnet Electronics Marketing, CAM RPC, Digi-Key, Elmo, Nu Horizons, and Zeus.
Distributed in Canada by Arrow, and Avnet Electronics Marketing.

Austria, Maxim GmbH (Deutschland); **Belgium,** Master Chips; **Czech Republic,** Spezial-Electronic KG; **Denmark,** Arrow Denmark A/S; **Finland,** ACTE NC Finland Oy; **France,** Maxim France, Distributors: Maxim Distribution, Dimacel Composants; **Germany,** Maxim GmbH, Distributors: Maxim Distribution, SE Spezial-Electronic GmbH; **Ireland,** FMG Electronics; **Italy,** Maxim Italy, Distributor: Esco Italiana S.p.A; **Netherlands,** Getronics Telecom Solutions B.V.; **Norway,** ACTE Norway AS; **Poland,** SE Spezial Electronic Spolka Z.O.O.; **Portugal,** Avnet-ADM Electronics, S.A.; **Russia,** SE Spezial-Electronic ZAO; **Spain,** Maxim Distribución, Avnet-ADM Electronics, S.A.; **Sweden,** Maxim Sweden, Egevo Elektronik AB; **Switzerland,** Maxim Integrated Products Switzerland AG; **U.K.,** Maxim Integrated Products (U.K.), Ltd., Distributors: Maxim Distribution (U.K.), Ltd., 2001 Electronic Components, Eurodis HB Electronics; **Ukraine,** Spezial-Electronic KG.

MAXIM is a registered trademark of Maxim Integrated Products. © 2000 Maxim Integrated Products.

Two Japanese teenage girls sit engrossed with the popular I-mode service, which has been a great success. Mari Matsunaga, the creator of the incredibly popular service, is an anomaly in the Japanese business world in that she is a woman.

Photo: Lars Åström

The woman behind Japan's I-mode

NTT DoCoMo launched its I-mode service in February 1999. Today there are ten million users and that number is growing by 50,000 new subscribers daily.

One woman, Mari Matsunaga, is the person behind this unbelievably popular form of mobile Internet.

It was back in 1997 that NTT DoCoMo, Japan's largest mobile phone operator, began planning to launch a service that would enable data transmission to subscribers, allowing them to do more than simply talk on their phones. Like every other operator, NTT DoCoMo knew that the future lay in mobile Internet.

It was engineer Keiichi Enoki who took on responsibility for the new project. He understood that content would be an integral aspect and turned to Mari Matsunaga.

She had previously made a name for herself as an editor who had taken over several boring, unprofitable publications and turned them into very popular, profitable ones. Most of these were job listing magazines, with her most successful one being a magazine with placement ads for women.

The choice of then 42-year old Mari Matsunaga was very unusual for NTT DoCoMo and Japan in general. In addition to the fact that she was a woman in a male-dominated company, she had no technical expertise whatsoever. When she became the head of the company's Gateway Business Planning Department in July 1997, she didn't even own a mobile phone.

The first thing Mari Matsunaga did was to foster a creative environment within the corridors of DoCoMo. She implemented brainstorming meetings during which beer was served, had comfortable sofas delivered to the conference room, and called the meetings "Club Mari." These efforts helped generate a breath of fresh air within the company.

Publishing experience

Mari Matsunaga did not let the technology for I-mode, as the project was called, limit her conceptual ideas. To her, the most important aspect was the content itself.

Her idea was for I-mode to serve as a convenient repository of information that would be extremely easy to use. The motto was "anytime, anywhere, anything."

Moreover, the service should be very inexpensive. With those parameters, according to an article in The Daily Yomiuri newspaper, the world's most advanced mobile telephone Internet service was born.

Engineer Enoki and his team turned Mari Matsunaga's ideas into a technical reality. In the resulting packet communications system, users pay a fraction of yen per data packet, rather than for a fixed amount of time. Today, I-mode users have access to 20,000 websites that are tailor-made for the telephone's screen.

Also interviewed in the article about Mari Matsunaga, who left NTT DoCoMo in April of this year, was Kotaro Chiba of the Tokyo-based company Cybird, one of the largest I-mode companies in terms of content.

It is his contention that her success came from the fact that she was a newspaper person who had worked within a field where images and text were the most important aspects.

When NTT DoCoMo first contemplated creating I-mode, they focused almost solely on the technology itself. However, for ordinary users, such as students and school children, how the technology works is of no interest at all. In fact, most Japanese people associate the word Internet with something difficult.

Business woman of the year

In Japan, it is not at all common to have a computer in the home, which is why the word Internet is never mentioned in commercials for I-mode. Rather, it marketed as a new mobile phone service, which is fun and easy to use.

The popular Japanese business magazine Nikkei Woman recently named Mari Matsunaga Woman of the Year 2000, for her work in creating I-mode.

She has also written a book about her experience entitled, "The Making of the Mega Commercial Hit of the Century." This past September she founded e-Woman, a new Internet publication for women in Japan. As for her own successes she says:

Mari Matsunaga

"I'm just a small woman, almost completely without physical strength. But I wanted to show that you can accomplish something big, without any special skills or traits, as long as you are given the chance. If you like your work, things will happen."

Gunilla Tamm
gunilla.tamm@lme.ericsson.se

FACTS/**I-MODE**

- I-mode is a packet data transmission technique for PDC, Japan's equivalent to the GSM network.
- I-mode uses a specially adapted version of HTML, the language of regular Internet Web pages, known as C-HTML
- The use of C-HTML is one of the keys to its success – only minor adjustments to the HTML code are required. That, in turn, makes it easier to generate content.
- Subscription to the service costs just SEK 30 per month, with users paying for the amount of information they transmit. E-mail messages cost roughly SEK 0.30 and an ordinary bank transaction around SEK 2.
- Entertainment services dominate available I-mode content.

Vodafone invests in China Mobile

»» The world's largest mobile phone operator, Vodafone, is acquiring a 2.6 percent stake in the Chinese operator, China Mobile. Vodafone, based in the UK with a subscriber base of 66 million, will pay SEK 25 billion to become the first foreign shareholder in a Chinese operator.

China Mobile is currently in the process of buying mobile networks in seven provinces from its parent company, China Mobile Hong Kong.

Motorola and Palm to collaborate

»» Palm and Motorola have initiated a collaboration to combine a mobile phone with a handheld device. They plan on accomplishing this by installing the Palm operating system on a Motorola phone, which will be launched in 2002. Motorola hopes the announcement will help jumpstart the market for third-party software that users can install themselves. The Palm OS is renowned for having many independent programmers who develop and market software for the handheld devices. Collaboration within the Symbian consortium, which includes Motorola and Ericsson, will be unaffected. The consortium has developed the Epoc operating system, which Ericsson's new R380 telephone is equipped with.

Vodafone puts up venture capital

»» Vodafone Venture is the name of a new venture capital company that mobile phone operator Vodafone has started. The company has GBP 100 million to invest in primarily wireless and mobile Internet business concepts.

Vodafone Venture's own business concept is to focus investments on the start-up of new companies, that is, on companies in the first or second phase. The financial firm Goldman Sachs, of the US, will assist Vodafone and also has the option of financing startup companies.

Handheld, mobile devices converge

»» Handheld manufacturers such as Palm, Handspring and Psion are stepping up efforts to turn their products into GSM telephones, although the strategies they are using differ. Handspring will begin selling an American GSM module for its Visor handheld this October, under the Visorphone name. Palm does not utilize the same module system as Handspring, but that has not stopped the company from launching an add-on that connects to the popular Palm V model through a cradle beneath the device.

The world's third largest handheld manufacturer, UK's Psion, will be launching a GSM equipped handheld device next year according to the wapland.no news service.

Kyocera phone to use Palm OS

»»The Japanese company Kyocera will be the first in the world to launch a mobile phone based on the Palm OS operating system, according to the magazine Computer Sweden. Telephones will be introduced on the market before the end of this year.

Now Available!

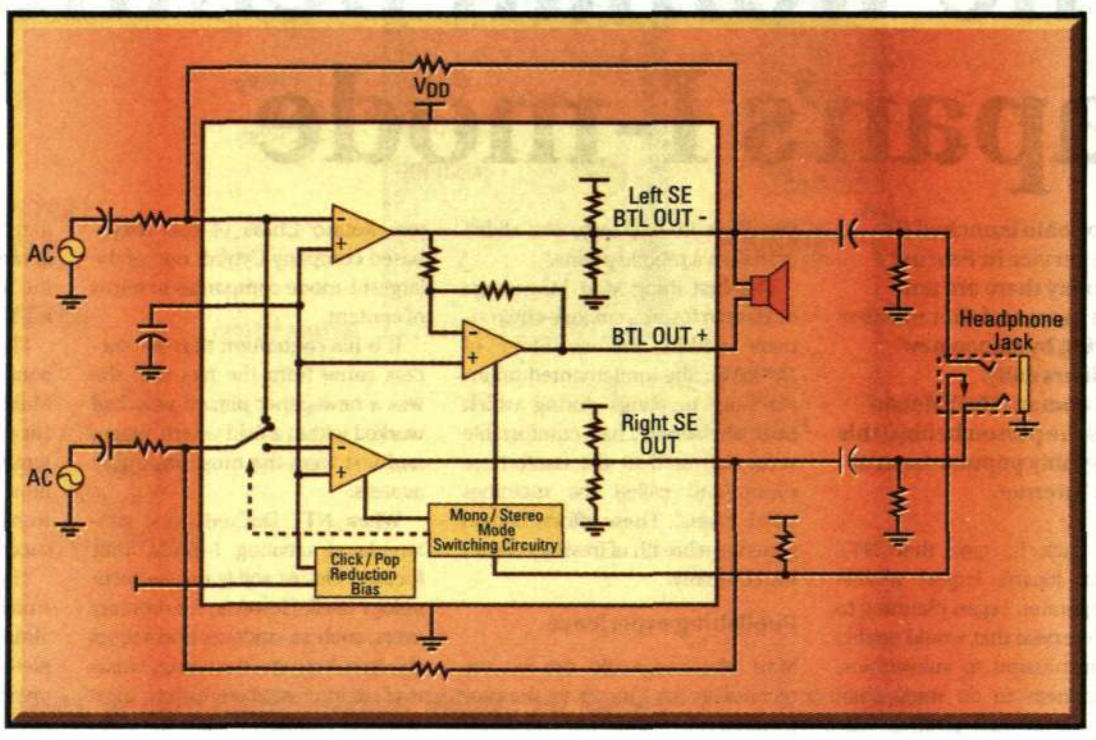
10-Pin MSOP, 1.5W Mono + 300 mW Stereo Boomer® Amplifier

National's LM4850 Available in 10-Pin MSOP and 14-Pin TSSOP Packages

- Mono 1.5W Differential at 4Ω or Stereo 300 mW Output at 8Ω
- Headphone Sense Pin Automatically Allows Use of Headphones @ 95 mW
- "Click and Pop" Suppression Circuitry
- No Bootstrap Capacitors Required
- Thermal Shutdown Protection
- Unity-gain Stable
- Low Shutdown Current

Ideal for Use in Portable Computers, Desktop Computers, PDAs, Hand-held Games, and Cell Phones

For More Information on LM4850:
www.national.com
or fax us at
+49 (180) 5 12 12 15



©National Semiconductor Corporation 2000. National Semiconductor, and Boomer are registered trademarks of National Semiconductor Corporation. All rights reserved.

Please visit us in Munich at the electronica 2000
November 21 – 24, 2000
booth A4.506

National Semiconductor

Just a phone call away from next disaster area

The telephone rang on a Saturday. Stig Lindström was in his office at Ericsson in Bangladesh.

"Can you go to Tadzhikistan immediately? A famine situation is imminent."

The voice on the other end of the line belonged to Dag Nielsen. He works for Ericsson Response, the company's disaster relief program.

Almost half of Tadzhikistan's population is expected to be living on the edge of famine over the next year. Food is prepared in the traditional manner on an open stove.

Photo: Stig Lindström

➤ A few days later, Stig Lindström was on the plane. He would be a part of the International Red Cross's advance team that would conduct an evaluation of the situation in Tadzhikistan. Stig Lindström was the group's communications specialist. When over 100,000 tons of food are going to be sent into a country to avert a famine, where between two and three million people are at risk, you need a functional communications system.

Stig Lindström

"We had two weeks to form an understanding of the extent of the famine. And even though my primary task was to evaluate communications needs, everyone in the group had to assist with everything," says Stig Lindström, a few weeks after returning home.

Plenty of experience

Stig knows what he is talking about. He has several years of experience from both disaster relief and peacekeeping work. He was part of the peacekeeping force in Lebanon, worked during the famine disaster in Somalia and was in Baghdad during the Gulf crisis. It's not possible for him to say "that's not my area" during crisis situations.

Together, the group's task was to conduct a realistic evaluation of the situation before a disaster became a reality. The information they gathered would serve as support for a decision by the Red Cross and all of the world's donor nations.

This was no easy task in a country that more or less lacks communications, good roads and everything else found in the industrialized world. The small advance team traveled around the country, talking with everyone from governors to ordinary citizens to volunteers. It was not a rosy picture the group returned home with.

Unfortunately, the world rarely reacts until images of starving children are shown on TV

Civil war, economic crisis and poor harvests have, during the past decade, torn away at the country and its people. Approximately 85 percent of the population live in poverty, and over the past two years, they have more or less depleted the small reserves that remained – the family's pig or hens or even the seed for next year's crop. This year, the harvest is only expected to cover one quarter of the country's needs.

Two million could die of hunger

Three million people, almost half the country's population, are expected to be living on the edge of famine during the next year. Two million of those risk death from malnutrition.

"If no relief efforts are made, we will see the same images that we've seen from famines in Somalia. Unfortunately, the world rarely reacts until images of starving children are shown on television," says Stig Lindström.

"It's also important to shine a spotlight on Tadzhikistan to shape public opinion, otherwise there won't be any money from donor nations."

Communications also need improvement. The existing relief organizations are utilizing radio communication equipment, but it is inadequate. Moreover, the relief organization can make better use of the communications resources. Normally, every organization has its own radio communications network, but through better coordination, communications could be utilized more effectively.

"Obviously had to go"

Stig Lindström was also assigned by Ericsson to see if the company could go in and assist with essential communications equipment.

But since the current needs primarily involve VHF equipment, an area that Ericsson sold off a few years back, Stig Lindström made the decision that Ericsson will not donate equipment. This time, it was his expertise that was Ericsson's contribution.

"It was obvious that I had to go to Tadzhikistan. I also think that this is a good way for Ericsson to make an effort by contributing our expertise," he says.

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

Ericsson Response donates expertise

During the months since Ericsson Response was launched, a core group of three people have developed and solidified the concept.

The group is in close contact with the UN and the Red Cross, the two organizations with which Ericsson has chosen to collaborate.

➤ One of those three is Dan Nielsen, who ordinarily works at Ericsson Radio Systems, but who has been lent to the Ericsson Response project. He has been involved with relief work for many years, both for the UN in New York and Geneva, the Swedish International Development Cooperation Agency (SIDA), and the International Red Cross.

What can Ericsson contribute with?
"In addition to assisting with equipment in some instances, we will be contributing our expertise. We are now in the process of recruiting technicians and marketing people internally. They will be included on a list of people who, if necessary, could leave their regular job for a shorter period of time to assist the UN and Red Cross in disaster relief efforts. This can involve assisting in the assessment, as in Tadzhikistan, or technical expertise in conjunction with a direct disaster relief effort."

"In the future, it might also be possible to contribute people with logistical talents who would be able to help in directing relief shipments to those who need them."

Isn't there a risk that you will take away resources that are needed in Ericsson's everyday operations?
"Yes. Talented technicians and logistics workers are in short supply. But this is a small endeavor, and it is based on there being an agreement between the manager and the employee involved in the program. We must never put our core operations at risk."

Why, then, should Ericsson devote its resources to disaster relief efforts?
"I believe that it is becoming increasingly important for companies to be good citizens in society, and to give back something to society. Companies are not isolated islands in society, but rather a part of it. This is also about building up Ericsson's brand name, both internally and externally. I think that it is important that employees can feel proud of their company. It is also a way of attracting new employees – salaries are not enough today. People value other things as well," says Dag Nielsen.

Dag Nielsen

Don't we run the risk of winding up in the middle of a political crossfire by collaborating with large organizations such as the UN and the International Red Cross?
"If our efforts are truly going to achieve results, we have to collaborate with organizations that can and do have disaster relief as one of their primary tasks."

"The UN and the Red Cross are absolutely the biggest players in the field and together we form a strong group. If we don't work with them, then we run the risk of causing more trouble than helping."

What about the UN and Red Cross? Why did they want to collaborate with Ericsson?
"We were, quite simply, the first ones to come up with this idea. And now we have taken over that territory. Moreover, we came to the UN with our proposal at just the right time."

"Secretary General Kofi Annan already had the idea of collaborating with the business community. Furthermore, there is a need to oversee communications solutions for various UN organizations. Currently, all the various UN units have their own systems. Kofi Annan probably realizes that we can help increase joint efforts."

"This does not, however, mean that other companies should not contribute to social development and collaborate with other relief organizations. There are also many other areas than simply disaster relief efforts. Some focus on healthcare, others on education."

Mia Widell Örnung

The Corporate Downsizer.

Introducing the new Ericsson R380, the ultimate corporate communication tool. It combines the functions of four key devices (mobile phone, laptop, organizer and notepad), and it's so easy to use, it's irresistible. So junk your organizer and leave your laptop behind.

With the R380, you can get secure access to the Ericsson corporate network and e-mail server, handling up to 200 mails, 1000 contacts, 100 notes and 700 appointments simultaneously – with full PC (e.g. Outlook®) synchronization, naturally.

It also offers fax transmisson (via SMS), concatenated SMS (allowing messages of up to 39,000 characters), voice memo, notepad with handwriting recognition, calendar and a world clock that displays two time zones at the same time. No wonder we call it a smartphone.

This is the one everyone's been waiting for – so make sure you're at the front of the queue. Check out the R380 website at www.ericsson.com/r380 to find out how you can downsize your corporate tools.

www.ericsson.com/r380

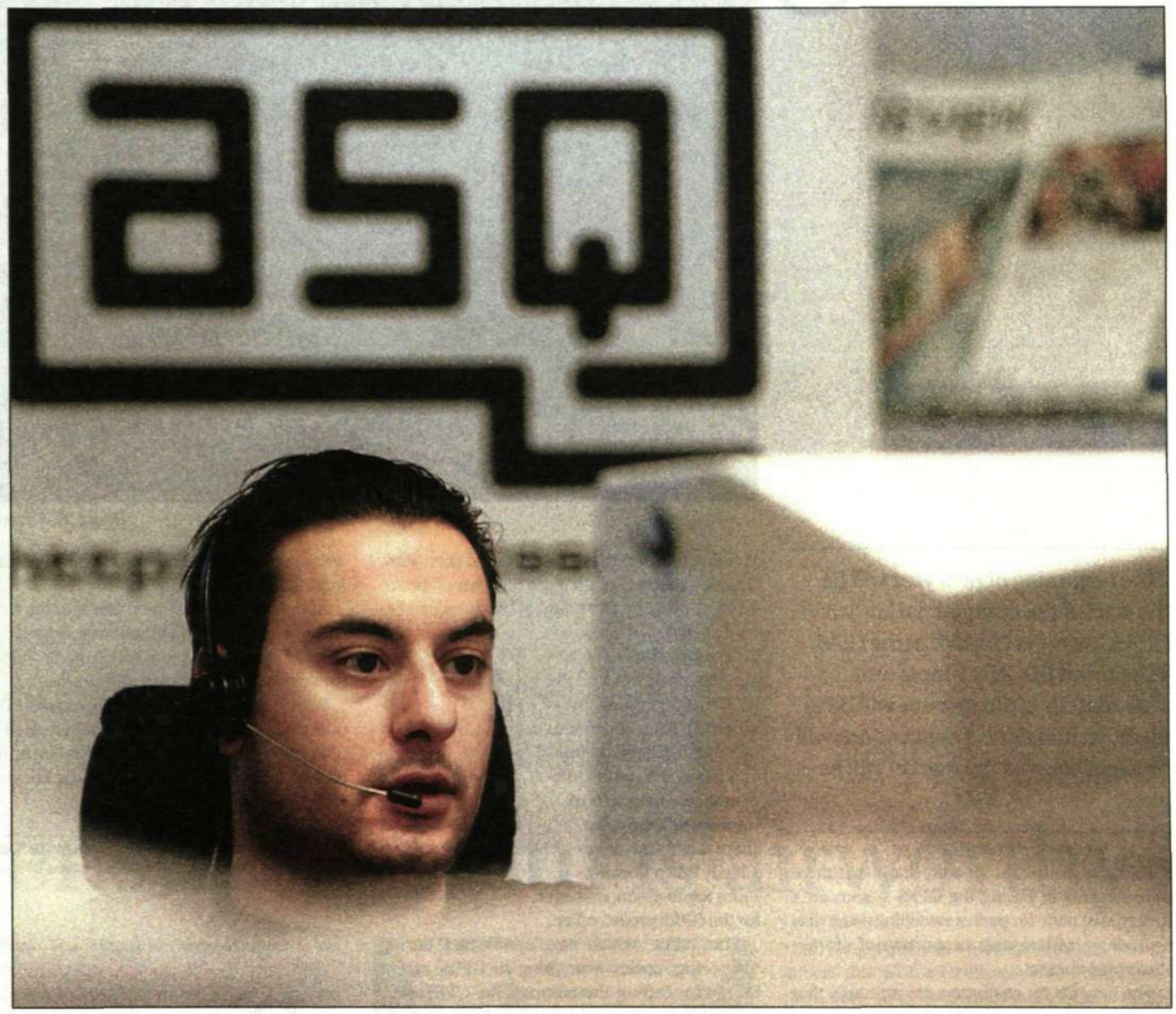
ERICSSON

Detectives at ASQ find the answers

ASQ & Global Business Systems is staffed around the clock, every day of the year.

Here, at Ericsson's global help desk in Kista, Konstantinos Malinis and his colleagues answer questions from Ericsson companies around the world.

Each month they handle thousands of questions.



Working at Ericsson's ASQ help desk and answering questions gives Konstantinos Malinis a broad contact network within the company.
Photo: Lars Åström

➤ A global help desk that could act as a clearing center for questions about products and services has been high on the wish lists of local Ericsson companies for many years.

With the opening of the Commercial Solutions Center in Kista in September of last year, this wish became reality.

Katarina Mellström

"Much has happened and the organization has grown during the year that we have been in operation," says Katarina Mellström, head of the unit, which is a part of the Global Services division.

ASQ – pronounced "ask" – now has some 20 staff members, but because its operations are expanding in all directions, Katarina Mellström expects that this number will grow to about 35 over the next year or so.

Although the help desk has only existed for one year, it is both well known and appreciated. A customer survey conducted by GSM Systems showed that ASQ was ranked 6.6 on a scale of ten.

Technical queries dominate

Lars Bergqvist is responsible for e-Business Support, which was started in mid-June. This unit now consists of three persons, but Lars expects the number to grow, as customers become more active in placing orders on the extranet.

This operation includes all customers except those within business communications and telephones.

Lars Bergqvist

"We provide support to all operators who have an e-business portal on the Ericsson Extranet. Today this is about 150 customers, who at least for the time being mostly make technical inquiries," says Lars Bergqvist.

All questions received on www.ericsson.com that are not related to phones are passed on to ASQ Internal Support.

Anders Ödman

"Each month, we receive about 1,600 questions, or help requests, as we call them. Requests can vary widely, from job applications and more or less serious sponsoring proposals to purely technical questions," says Anders Ödman, who is responsible for this function.

Reply within three days

Everyone who submits a question receives an acknowledgement indicating that the request has been received. Most questions are answered within three days.

The average response time is 20 hours.

"When you go into a store and ask a question, you expect to be treated politely and to get an answer. The same applies to the Internet," says Anders Ödman, adding that ericsson.com is actually a part of the Ericsson brand.

Extensive contact network

Anders Ödman and his colleagues have extensive experience in searching for information on Ericsson's intranet and the various internal websites, and they also collaborate with similar units both internally and externally. They therefore have a very extensive contact network throughout the company.

Elisabeth Lindblad is the manager for ASQ Intranet Support, which is a unit within the help desk organization that was started about a year ago and is now staffed around the clock, 365 days a year.

Elisabeth Lindblad

"We help local companies and Ericsson employees with sales-related question on GSM, TDMA, WCDMA and Global Services. We will also be taking over questions about fixed telephony," says Elisabeth Lindblad.

When the function was started, an internal database was created for use by ASQ staff members that contains the answers to the most common questions.

Today the database contains about 2,800 questions and answers.

The requests received by the group involve everything from brochures to extremely technical questions.

Elisabeth Lindblad's group consists of eleven permanent employees and ten third-year students from the Kista campus of the Royal Academy of Technology. The students work mainly at night together with Ericsson employees.

Their tasks are mounting, however, and during the autumn additional personnel with technical or sales experience within Ericsson will need to be recruited.

Many questions about WCDMA

"GPRS and WCDMA are hot topics right now, which is particularly evident in the questions that we receive," says Konstantinos Malinis at ASQ Intranet Support.

"This is a fun job that gives you a broad contact network within Ericsson. Sometimes, however, finding answers is a bit like detective work," says Konstantinos Malinis with a smile.

The question that he offers as a demonstration of how requests are handled is also not an easy one.

The question, which came from Denmark, was whether it is possible to roam between GSM, CDMA, TDMA and AMPS.

After some searching in the internal database, he forwarded the question to the help desk for GSM Market Support in Aachen.

The request is given the status "work in progress," and a colleague takes responsibility for monitoring progress when Konstantinos leaves work for the day.

"The goal is that we should be able to answer as many questions as possible ourselves. To increase our knowledge, we are out at various product units every third week. My areas are GPRS and product units within DBO, which is the Data Backbone and Optical Networks division," concludes Konstantinos Malinis

Gunilla Tamm
gunilla.tamm@lme.ericsson.se

http://asq.ericsson.se

FACTS/HELP DESK

The Commercial Solution Center opened last year. Now, the center has three units. In addition to Intranet Support, which is the oldest and the largest group, there are units for Business Support and Internet Support.

On July 1, the name was changed to ASQ & Global Business Systems and a fourth unit, Global Business Systems, was formed that will coordinate between business systems within the division and the corporate IT unit with respect to all internal projects and activities in the IS/IT area.

GPRS wave rising fast

Photo: S. Cazenave

"The beginning of next year will be the start of the commercial launch of GPRS," says Per Nordlöf at the GSM, TDMA and EDGE business unit.

At that time, the systems will be in place, terminals and applications will be available, and the market will be ready.

➤ Ericsson realized at an early stage that there were benefits in basing the GPRS system on a new type of node for packet switching using new technology with a large proportion of off-the-shelf components.

The benefits for customers are primarily that the new technology provides the capacity of handling a large number of subscribers without overloading the system.

An additional benefit is that the basic technology for Ericsson's packet switching concept is the same for both GPRS and UMTS, which makes it easy for the operator to migrate from GPRS to UMTS.

Per Nordlöf, who is responsible for business development and technology, believes that it may take some time before subscriber growth takes off. The terminal market drives development, and experience shows that it usually takes some time before a new product catches on.

Christmas favorite

Per Nordlöf

"My guess is that WAP phones like the R320 and the R380 will be one of this year's most popular Christmas presents," predicts Per Nordlöf.

Operators who already have their own WAP portal will have an advantage when GPRS is launched commercially, since they can already offer a number of services that will be both better and cheaper with GPRS.

The importance of having a WAP portal is demonstrated by Japanese operator NTT DoCoMo's I-mode mobile portal, which is breaking all records for popularity.

Today's services will eventually draw subscribers and traffic to GPRS. Per Nordlöf provides an example using SMS. Imagine that a user receives an SMS message that Sweden has just scored a goal in an important hockey match. Pressing a key on the terminal would then show a video sequence of the goal. SMS supplemented in this way by GPRS and 3G services can become a reality by 2002.

Björn Samuelsson

"Development of GPRS is virtually complete, and the most important task this autumn will be implementation, meaning installing and taking the system into operation. Our goal is to implement the market share that Ericsson has already taken," reveals Björn Samuelsson, manager for the GPRS project office.

This office, which was established during the spring, covers everything in GPRS except terminals. During the autumn, the GPRS platform will be gradually upgraded. In contrast to the once yearly upgrades that are the norm, new functionality will be added every third month.

New demands

If the new telecom world, in which data and telecom are converging, entails major changes for Ericsson, the changes are even greater for operators.

Customers have high expectations. At the same time, it may be difficult for them to understand what the change in technology will mean.

Today the operators' business systems are based on voice, but in the future voice service will be just one part of the package. This will place new and completely different demands on how billing is handled, for example, and on how customer service is managed.

At the same time as operators are introducing new technology like GPRS, they have to manage growth in today's cellular networks.

Developing new tools

During the autumn, a seminar series will be held for customer project managers at Ericsson companies around the world. In addition, there will be customer visits at which the GPRS system and the various services that Ericsson can offer are presented.

Because GPRS is the first step into the new industry of data communications, new testing tools will be needed.

"In addition to developing our own tools, we have also used external tools, and in so doing, forced our suppliers to make advances," says Björn Samuelsson.

The project office is now working on a new website, where all information will be available for ordering GPRS equipment.

Although it will still be a few months before GPRS in launched on a broad scale, several operators are already running services with selected subscribers regarded as friendly users.

Both Per Nordlöf and Björn Samuelsson emphasize that it is very positive that Ericsson can offer both the GPRS system and its own GPRS phones simultaneously. This makes Ericsson a total supplier.

Gunilla Tamm
gunilla.tamm@lme.ericsson.se

Pioneering work in Australia

Telstra's commercial launch of GPRS technology in Sydney with Ericsson is a significant first for both companies. Never before has either company rolled out pre-commercial network software on a commercially operating network, according to David Kaye, Senior Manager Product Strategy for Telstra's GPRS deployment.

➤ Telstra began trialing Ericsson's GPRS system in late 1999. Soon after, Telstra and Ericsson began building a full GPRS network installation in Sydney and went live with GPRS on Telstra's commercial GSM network in April.

Telstra decided to bypass the traditional laboratory and field testing.

As a result, Telstra was able to roll out a commercial service much quicker than would normally be the case.

Deploying GPRS on a real network has allowed both , Telstra as an operator and Ericsson as a supplier to learn a lot about GPRS, giving Telstra a superior understanding of what is required to deploy GPRS to that of its competitors.

"Putting something brand new into our heaviest density population areas was a significant risk," emphasizes Telstra's David Kaye. "But we worked together with Ericsson to minimize the risks involved in taking Ericsson software directly into a live GSM network.

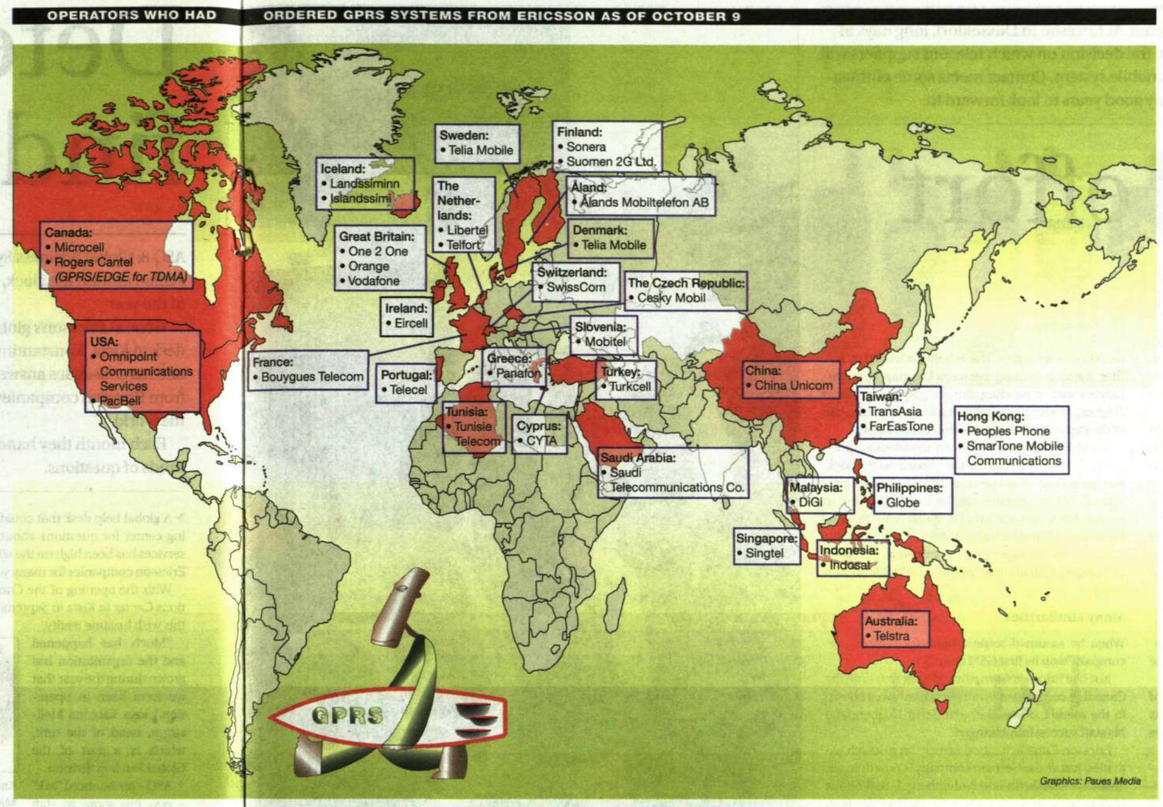
"We have really appreciated the way Ericsson has worked with us, really going the extra mile in this process," adds David Kaye.

The trials have made extensive use of Telstra's own portal, telstra.com, and Ericsson worked closely with Telstra to develop other applications that show the advantages of being online all the time. For instance, a stock ticker constantly updating on the screen and a service for transmitting images captured with a digital camera and uploaded to the Telstra website with Ericsson's R520 GPRS phone.

Telstra is the first Australian operator to launch GPRS and WAP.

"I think Australia is going to be one of the leading markets for GPRS," concludes a satisfied David Kaye.

Roula Karakostas



Test pilots ensure system is airworthy

In a control room of only a few square meters, Lubomir Cechal and Ana Manjon Torres sit in front of a table loaded with computers, a WAP gateway and a number of different terminals. There is an air of secrecy about their work.

➤ Here at the MAI (Mobile Applications Initiative) lab, which is one of Ericsson's test centers for GPRS, Ericsson is testing not only its own terminals and applications, but also scrutinizing products from competing suppliers.

"We have a lot of toys here," says Ana Manjon Torres with a laugh, as she holds up the latest in GPRS devices, a Palm Pilot that communicates via Bluetooth with an R520 and onward over the GPRS network. This product is not a secret, since it was demonstrated at the Netcom show a few weeks ago.

Activity is frantic at the test center. Ericsson's R520 GPRS telephone and Ericsson's own applications are being tested on a live GPRS network, which is running in the next room. The system is constantly updated with the latest software as it is approved by the industry in various standards bodies.

Torture testing

Today Ericsson products are not being tested, however. One of Ericsson's competitors in the terminal market is visiting and testing its products on Ericsson's GPRS system. They can't be seen, but they are there in one of the adjoining rooms.

"They'll be going to lunch soon, so we can start testing again," says Lubomir Cechal, constantly checking the system's status on the computer in front of him.

"Hmm. The system is down. I'll have to restart it," he says.

"These tests are like torture testing for the system, since the demands are much more extreme than actual use in a commercial system," explains Ana Manjon Torres.

So-called interoperability testing is extremely important for Ericsson and the entire industry. If products from all suppliers do not work together, market growth will suffer.

No one wants a phone that only works on half the networks. Motorola and Nokia phones have to work on Ericsson networks, particularly in view of the fact that half the GPRS networks will be delivered by Ericsson. Similarly, Ericsson's phones are being tested on several competitors' networks.

Black boxes

Performing these tests is not entirely easy. To reveal as few details as possible while still allowing test to be performed, there are carefully worded non-disclosure agreements.

Some terminals are clad in black boxes to avoid revealing design details. Technical performance, however, is hard to conceal, which is why there are non-disclosure agreements.

While we wait for the colleagues from Ericsson's competitor to finish their tests, we visit the equipment room. Everything needed for a real network is here. Although it is not large, this is a complete GPRS network. The GPRS user has to stay inside the building or no more than a few meters away, perhaps as far as the bus stop outside to maintain radio contact.

The system's two base stations are mounted on the wall. Beside them is a rack of servers, one for SMS and one for mobile Internet applications. Another rack contains the GPRS node itself, with one server that communicates with the radio base stations and another that maintains contact with other nodes in the GPRS network and on the mobile Internet. In addition, there are servers for the management and billing systems. Ericsson has its own frequencies for the tests, and there are special SIM cards.

Lubomir Cechal and Ana Manjon Torres test terminals and services in a real GPRS network at Ericsson's test center in Kista. Network coverage is limited, but they can use their GPRS terminals sitting on a bench outside the test center. Photo: Lars Åström

"It looks like they've gone to lunch," says Lubomir Cechal, when we get back to the control room. He begins connecting a small Vaio handheld computer to the R520. His colleague is busy surfing the WAP network with a Palm Pilot. Ericsson's MC218 is demonstrated in the same manner.

Testing proceeds from service to service, news, chat, images and stock quotes. All over GPRS. To ensure that all the GPRS services and applications that will be launched on the market really work, additional testing is performed in a simulated GPRS network running on a computer in the next room. In this environment, every GPRS application is subjected to all possible conditions.

"This screen allows me to configure the terminal's capacity," says Birgitta Nyström, pointing to the display in front of us.

Heavy traffic

Other factors that affect performance are how many users are making calls or surfing the Internet simultaneously and how far from the base station the terminal is located.

The greater the distance, the poorer the bandwidth. In addition, the operator can limit how much of the total traffic is GPRS by limiting the number of time slots made available to GPRS traffic.

Birgitta Nyström tests mobile applications. Together with her colleagues at MAI, she has tested nearly 100 since the start last November.

Many are WAP-based services that have been developed by Ericsson or one of the many MAI member companies. Ericsson allows other companies to test their applications at the MAI lab because the company wants to see as many applications as possible on the market. This will increase growth, thus benefiting both telephone and system sales.

"An important aspect is testing how the application behaves when the radio link goes down. The application must not hang but should be able to survive short interruptions," concludes Birgitta Nyström.

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

The first decision is just around the corner. At Ericsson in Düsseldorf, long days of negotiations are approaching a climax: the decision on which telecom suppliers will be chosen to construct Germany's 3G mobile system. Contact meets some enthusiasts who believe that Ericsson has many good years to look forward to.

All-out effort on 3G

➤ Ericsson Germany is preparing to take the lead on the 3G front. Bernt Högberg, new President of Ericsson Germany, is determined to secure at least three of the six contracts.

Currently, Ericsson Germany is negotiating with all six of the operators who acquired licenses for third-generation mobile systems in August. The first contract will be signed in October and everything must be ready before the end of the year. Under the terms of the operators' licenses, half of the population must have access to 3G services by 2005 at the latest. However, calls made to each of the six operators reveal that most of them are aiming to launch services some two, tree years earlier.

Bernt Högberg started his new job in the middle of the 3G race. As Ericsson Germany's new President, he has no time to consider any reorganizations; virtually all his energy has to be devoted to the 3G issue.

"Ericsson has invested an enormous amount of time and energy on the development of 3G. This gives us an edge over our competitors, just as we had with GSM at the beginning of the 1990s.

"We have marketed our total solutions aggressively but we also need some more innovative approaches. Today, new demands are being made, for example in the area of financing plans," he continues.

Mobilization of resources

Both Ericsson and its competitors offer various financing options, with an installment-plan contract as one example. For all of the players involved, there is a higher degree of risk to be assumed today, than previously.

To prepare for the contracts that are expected to be written in the near future, the company has to mobilize its resources. This is being achieved by further training existing personnel, hiring new employees and expanding the supplier base. Bernt Högberg is also planning to make even greater use of the expertise that exists within the company.

Bernt Högberg maintains an unobtrusive presence. He is not a person to pat himself on the back. But his record of achievements and satisfied personnel within Ericsson speaks for itself. Prior to joining Ericsson Germany, he spent three years as President of Ericsson Radio Access.

But it was the experience he gained as President of Ericsson Canada that will be invaluable to him today.

Many similarities

When he assumed responsibility for Canada, the company won its first GSM contract.

Just like Ericsson Germany today, at that time the Canadian company was not particularly well known in the market, a situation that Bernt Högberg and his staff successfully changed.

Ericsson Canada focused heavily on research activities, just as the German company is now doing in Aachen, Hildesheim and Nuremberg. Based on his performance and experience, Bernt Högberg is in many ways tailor-made for his new role.

Bernt Högberg would like to destroy the myth that Germans can be boring, which isn't the case at all, he claims. He admits that the operators have made high demands, but he is able to turn this into something positive.

"It simply means that our company has to be even better."

Bernt Högberg agrees that it is easier to negotiate if you are able to speak the local language, but that it is also important to be able to express yourself in a subtle manner, so that unnecessary misunderstandings are avoided. He is currently taking language lessons to improve his German, in which he was quite fluent when he worked as a salesman in Germany during the 1970s.

"I feel that I am still quite fluent at times, but only until my German teacher points out all the mistakes that I have made," he says with a laugh.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

A low-key guy who gets things done. Bernt Högberg, new President of Ericsson in Germany, aims to win three out of six 3G contracts.

Speculations in the media abound on how the 3G license proceeds are to be used in Germany. But the young people Contact spoke with in Düsseldorf knew nothing about the licenses, even though the increase in computer and mobile phone use is greatest among this demographic group in many European countries.

Photo: Ulrika Nybäck

FACTS/GERMANY

- Population of 82 million
- 32 percent mobile penetration
- Penetration estimated to increase to 60 percent during 2000
- Six operators have been granted 3G licenses
- Grop 3G and Mobilcom Multimedia are new players in this market
- Deutsche Telecom is the largest operator in Germany
- Germany is the third largest mobile phone market in Europe.

FACTS/ERICSSON IN GERMANY

- Total of 2,300 employees
- Head office and Ericsson Consulting in Düsseldorf
- Eurolab units that develop future mobile services and other features are located in Aachen, Nuremberg and Hildesheim.
- Sold in Germany: systems for GSM 900 and 1800, MINI-LINK, the ASTA adaptive antenna, GSM Pro, WAP-gateway and GSM On-the-Net.
- 80 percent of Mannesmann's radio-based mobile network features solutions provided by Ericsson.

Employees are among the best ambassadors for a company's brand. Ericsson in Germany has therefore distributed the colorful A2618 to all of its employees.

Tough job to reverse mobile trend

Today, Ericsson sells virtually no mobile phones in Germany, a market where prepaid services and inexpensive telephones are the big sellers. But based on its new strategy, Ericsson Germany aims to recapture lost share – and become the market leader again within the next three years.

➤ Tor Nordli-Mathisen from Norway took over responsibility for consumer products for Ericsson Germany in August this year. During the summer, the newly established manager commuted between Düsseldorf and Johannesburg, South Africa, where he was similarly responsible for the consumer side.

He has a tough job ahead of him. His objective is to transform today's two percent market share into a 20 percent share during the next three years. Ericsson held such a position in Germany at the beginning of the 1990s, when it was market leader in terms of mobile systems and telephones. Competition for mobile phones is now razor sharp. Germany's Siemens leads with an 18 percent share, closely followed by Nokia with 17 percent.

Optimistic future

Today, 80 percent of all mobile phones sold here are in the DEM 99 to 149 price range and include a prepaid cash card. Mobile penetration in Germany is low, at just 35 percent, a figure that is expected to almost double during the current year.

Despite today's low figures, the new consumer products manager is optimistic about the future. By the end of 2000, he anticipates that market share will already have grown to nearly 6 percent.

"Ericsson's new strategy to also focus on mobile phones at the lower end of the price scale fits in extremely well with the situation in the German market. With the A2618 phone, we have a major opportunity to close the gap to our competitors," he states.

Tor Nordli-Mathisen lists simple and clearly defined information among his guiding principles. Accordingly, to facilitate cooperation, he is ensuring that the company's Key Account Managers will in future be responsible for just one operator.

Tor Nordli-Mathisen

Ambassadors for the brand

Another important function will be to improve the company's contacts with retailers by supplying good product information and through the introduction of a loyalty program.

Internal information must also be improved – communication between different parts of the company must function more efficiently, managers must assume greater responsibility for informing their personnel and every launch of a new product will in future commence with an internal launch.

"There is a lot of talk about each employee being an ambassador for the brand, but we first need to practice what we preach," emphasizes Tor Nordli-Mathisen.

The internal launch of products is an important part of building up the brand and a way of stimulating all employees to become even more committed.

He considers that it is vital for all 2,300 Ericsson Germany employees to own and use an Ericsson mobile. Today, everyone of them has an A2618 telephone, with a variety of colorful cases.

"It would be ridiculous to let our own employees to run around with Nokia phones," he states categorically but with a wry smile.

On the table lies his own telephone, an R380 WAP phone.

He even finds time to WAP himself, reading the Norwegian dailies on-screen as he drinks his morning coffee.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

MY VIEW

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

Is the price of the 3G licenses too high?

Licenses for third-generation mobile networks in Europe are being auctioned off to the highest bidders. The question is if this will have a backlash effect on both us as consumers and the telecom industry as a whole, as governments allow licenses to become astronomically expensive.

➤ The consequences are as yet unknown. Telecom companies and their analysts describe various scenarios. Ericsson believes that license fees will speed up 3G network construction and spur the market. Many telecom analysts, however, claim that all the parties involved – telecom companies, operators and consumers – will suffer negative consequences, such as expensive services.

In the UK and Germany, the national coffers received a substantial boost when the 3G licenses were auctioned off.

In Germany, the price tag for six licenses in two frequencies was USD 44billion, money that will surely come in handy for Finance Minister Hans Eichel's struggle to erase the budget deficit by 2004.

The winners, if they all survive, are Mannesmann, Mobilfunk, T-Mobil, E-Plus, Viag Interkon and two newcomers, Mobilcom Multimedia and Group 3G.

The question is what the difference will be in the long run between the countries that chose the beauty contest over the free-market principles of an auction.

Will I as a mobile phone user in Sweden gain any advantage from the Swedish government's decision to give away the licenses to the operators that promise to be the best and the fastest? Will the services really be less expensive for me, or will the operators, and perhaps even their suppliers, simply have greater profit margins?

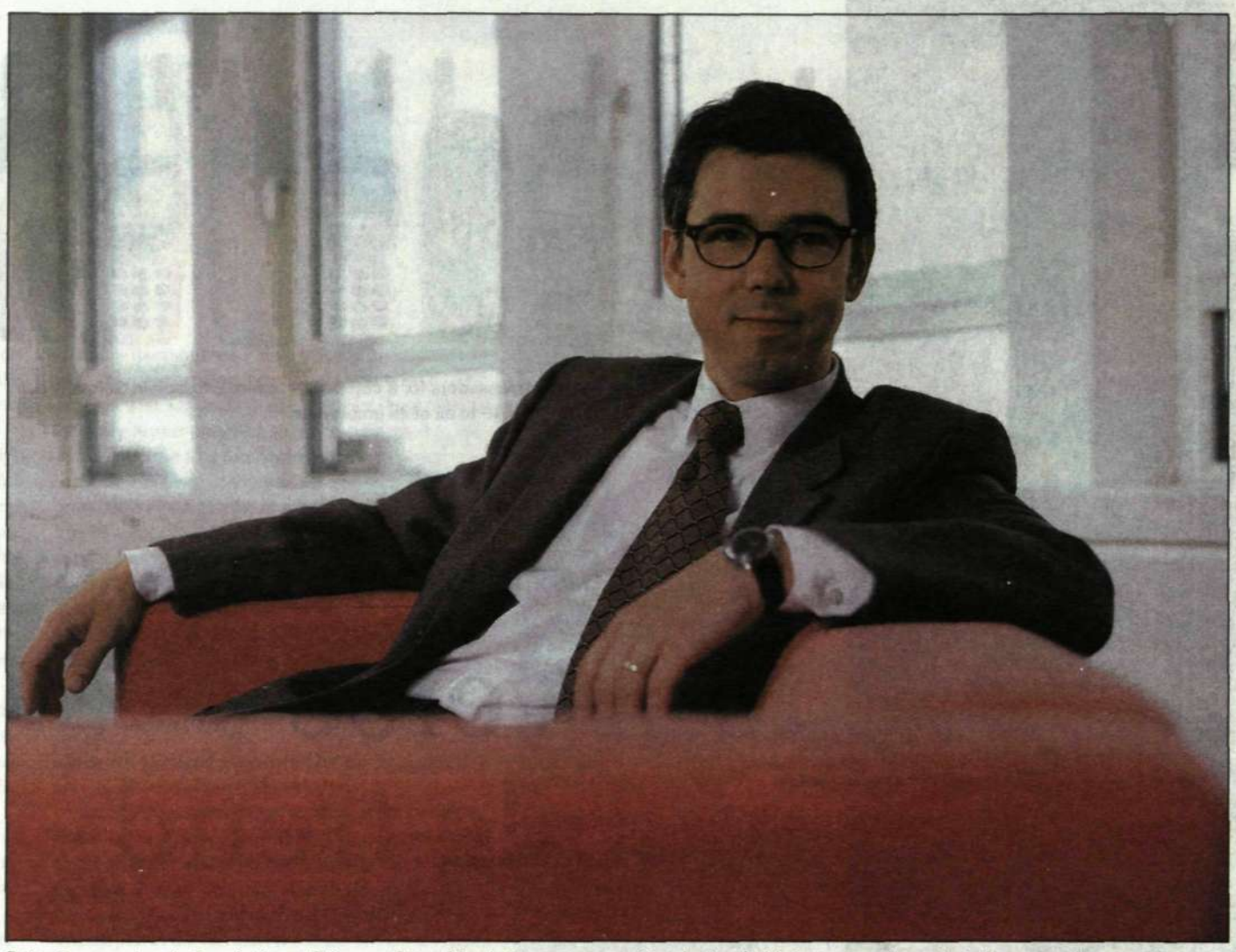
We can't do anything but wait and see. And hope that it won't cost a fortune to download music from the Net or see images of our friends as we speak to them.

Because that's what communication is really all about. We want it served to us our way, and at reasonable prices.

Ulrika Nybäck

Internal consultants open doors

Ericsson Consulting in Germany offers total solutions within mobile Internet. Using its knowledge of both technology and business strategies, the company is competing with the best consultants in Germany.



Peter Persson, head of marketing at Ericsson Consulting in Germany, a position he has held since operations started up more than a year ago. The subsidiary has been working since day one with some of the six operators bidding for for 3G licenses. Photo: Christoph Schuknecht

➤ The 3G question is permeating all of Ericsson in Germany, including the subsidiary Ericsson Consulting. The company has been working for a year with a few of the six operators who won 3G licenses.

The operators want to have help with everything from forecasts on mobile penetration to the development of business strategies and payment proposals.

Frequently asked questions include: How long will it take to regain the money we invested in the licenses? What services should we invest in? Which companies should we collaborate with? How can we take payment for the new services?

Door-opener

Peter Persson, head of marketing at Ericsson Consulting in Germany, believes that the role of an Ericsson consultant is not easy. The company must be credible and be able to reflect the entire telecom sector, while actually being part of Ericsson.

"We don't want our customers to feel obliged to buy Ericsson systems after receiving advice from us, but we nevertheless function as a door-opener. We are often the first business contact the client has with Ericsson. If we do a good job, the chances that the client will want to continue a relationship with Ericsson increases."

At the same time, the company has a breadth that is difficult to find at other companies.

"We have knowledge about the sector and the technology, combined with consulting expertise – a total approach that has attracted many customers," he continues.

An important link

Ericsson Consulting also collaborates with various companies that are themselves developing and want to offer WAP, GPRS and 3G services. In this fashion, they often act as a link between operators and companies, helping them to initiate cooperation efforts.

The subsidiary has grown rapidly in the consultant-friendly German market.

Since the start, slightly more than a year ago, the number of employees has increased from ten to 75.

They have managed to recruit talented consultants in an overheated job market and at the same time take advantage of both the local company's and Ericsson's knowledge and experience.

Ericsson Consulting's aim is to double its workforce every year.

Since it has only been established in Germany for a year, the company has fought for recognition and to establish a sufficiently large circle of customers. Peter Persson is satisfied with the results.

"We now have some 40 clients and an ad campaign conducted recently attracted extremely favorable attention."

Both experts and rookies

A consultant must always be able to present the latest discoveries in all areas, from business strategies to growth within the mobile sector.

How do you work to ensure that you are always up-to-date?

"We gather expertise mainly within various customer projects. Experience in mobile Internet is already available and Ericsson has unique technical knowledge, especially at the Eurolab in Aachen," Peter Persson explains.

"By employing experienced consultants and engineers who are recent graduates, we are able to create a favorable balance between the long experience of the consultant's role and fresh know-how from the university world."

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

3G licenses not an everyday concern

Contact spoke with some people in Düsseldorf and asked them if they were familiar with the 3G licenses that were auctioned off in August. Which services do they look forward to using once the networks are in place? The six German operators plan to launch 3G services in 2002 and 2003.

Photo: Ulrika Nybäck

Claudia Herzog works at a company that develops security systems.

"Yes, I'm familiar with the fact that a premium price was paid for the 3G licenses at the auction.

"I have tested a WAP telephone at work, but I think it's too slow at this point. I look forward to higher data speeds in the network and the simplification of many everyday tasks. I already book my airline tickets via the Internet, so it will be convenient to use my mobile phone for such things as booking a table at a restaurant."

Andreas Polowinsky runs his own cleaning company.

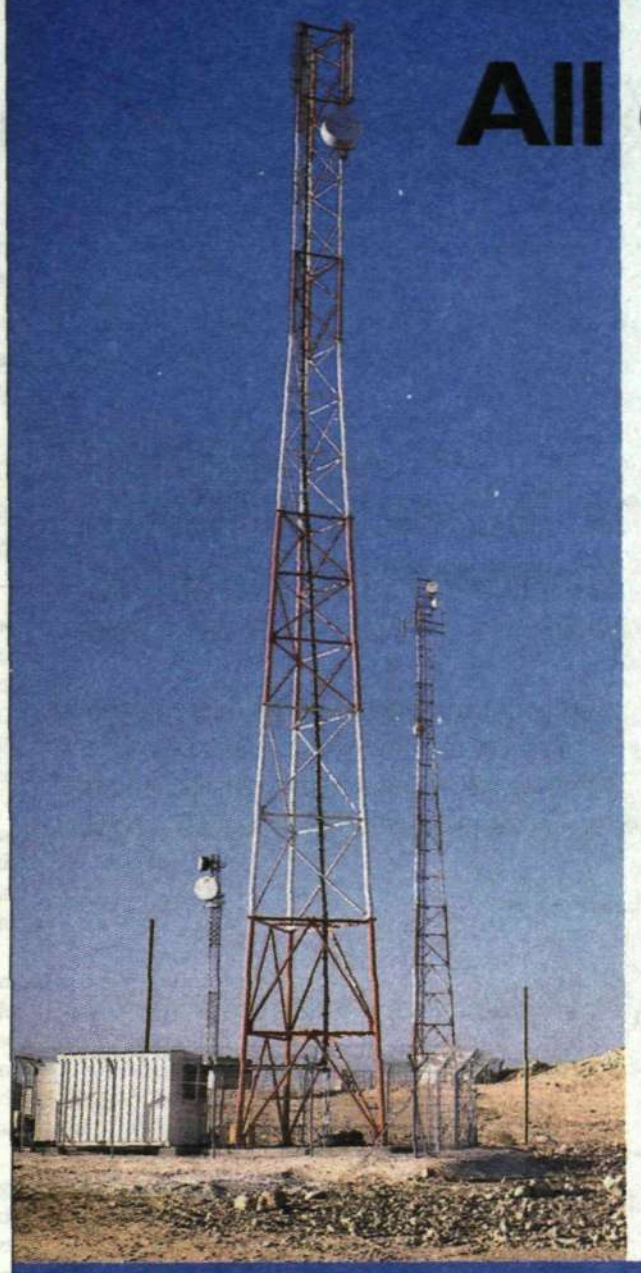
"No, I have not heard of the 3G licenses.

"A service I look forward to using is downloading music to both my computer and my mobile phone."

Beate Brevig is an art student.

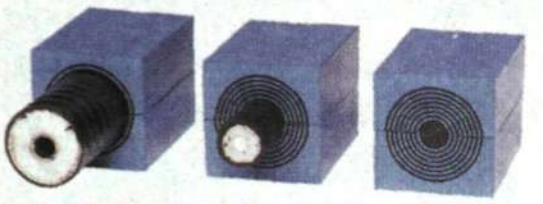
"No, I know nothing about the 3G auctions.

"I really don't know enough about this to be able to comment, since I just bought my first computer. I'm looking forward to shopping via the Internet and plan to start surfing more now."



All cables welcome

– with MultiDiameter technology



Small or large, many cables or few. It does not matter. Rox System cable entry seals are adaptable in the field and can handle a variety of different wires and antenna feeders thanks to the Multi-Diameter technology. Peel off a few layers and the cable fits perfectly, creating protection against water, dust and pests.

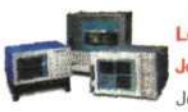
Rox System cable entry seals have become a popular standard within the telecom industry.

ROXSYSTEM

Roxtec International AB
phone +46 455 366700 • fax +46 455 82012 • info@roxsystem.com • www.roxsystem.com/telecom

COMPUTING TELECOM VIDEO

With Tektronix, sharing goals means sharing success . . .



Let us introduce you to Jean-Christophe Ronzier.

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

Ericsson is acknowledged as a world leader in communications solutions. And as a totally committed partner, Tektronix is a truly focused, global test, measurement and monitoring company, providing enabling test technologies that turn your ideas into reality.

To Jean-Christophe, your business success is everything. Because in a relationship with Tektronix, your vision is our goal. To take advantage of his knowledge and experience, call him on +46 (8) 477 6559 or email **Tektronix-Euro-KeyAccounts@tek.com**

Tektronix®

©2000 Tektronix, Inc. All rights reserved. Tektronix and the Tektronix logo are registered trademarks of Tektronix, Inc. All others are properties of their holders.

APIS Training & Seminars presents

The Technical Challenges of Bluetooth

28 November, Quality Hotel Globe, Stockholm, Sweden

- The Bluetooth 2.0 Technology
- Hardware and Software perspectives
- Future Bluetooth applications
- Brand and Qualification
- Demonstrations of Bluetooth implementations

The seminar is developed in co-operation with AU-System, Ericsson and Tactel.

www.apis.se

APIS Training & Seminars presents

SIM – The Technical Platform for Commercial Services

29 - 30 November, Quality Hotel Globe, Stockholm, Sweden

On this seminar you will learn about the latest SIM Technology and Architecture. Focus will be on how SIM can be used for new business opportunities. Learn how to launch applications and services based on SIM, and what will happen with SIM in the 3G world!

- SIM ++ Now and in the Future
- SIM application toolkit
- SIM card Developments for Mobile Commerce – today and tomorrow
- OTA – Remote SIM File Management and Service Management
- Browsers on the SIM

The seminar is developed in co-operation with SmartTrust, Giesecke & Devrient, Setec, STMicroelectronics, SONOFON and Infinion Technologies.

APIS Training & Seminars

For more information and registration please visit: www.apis.se or call +46-8-555 105 00

UMTS Forum

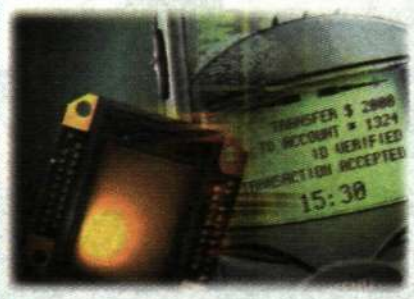
ETSI MEMBER

Advanced Features for Mobile Phones and Accessories

The **MP3 decoder-on-chip** allows to playback music files and record voice messages performing the best figures in power consumption.

The **Euterpe chip**, a high performance DSP for voice technologies, provides ease of use by enabling you to:
- make calls via voice commands
- turn incoming SMS into speech
- have a handsfree phone by using the intelligent microphone capability and a loudspeaker system.

The **CMOS sensor chip** captures high quality images with ultra low power consumption and compact size.



The **finger print recognition chip** ensures that only authorized users can perform business transactions on your phone and protects it against theft.

For more information, contact our sales office on +46 8 58 77 44 66 or see our website at **www.st.com**

THE PEOPLE WHO MAKE SYSTEMS-ON-SILICON WORK FOR YOU

The ST logo is a registered trademark of STMicroelectronics

Glimpse into future

A mobile phone which is also a calendar which is also a map which is also a news reader which is also an Internet browser…

Last spring, Ericsson unveiled its Communicator Platform – a glimpse into the future of the mobile Internet.

Mikael Rindborg demonstrates Ericsson's Communicator Platform — a glimpse of what is to come in the future. Photo: Ann Ek

➤ Product manager Mikael Rindborg pulls out a communicator to demonstrate. He paints the following scenario: we're in Paris, on the Champs Elysées, trying to get to Avenue Eiffel. We use our communicator's map application to assist us.

Mikael Rindborg opens the application and zooms in on our position, which is shown on the map with the help of the GPS navigator. He inputs our starting point and a small blue flag marks the spot on the map.

When we input our destination, the communicator asks us whether we will be going on foot or by car. We decide to walk and after a few seconds of processing, the communicator maps out the shortest walking path. The route chosen seems to be a nice one, running mostly along the quays of the Seine River.

The Communicator Platform attracted a great deal of attention when it was unveiled at the CeBIT trade show last spring. With its large color display, GPS navigator, Bluetooth link and a host of other advanced functions, it was unlike anything else.

Others to develop software

For the first time, Ericsson has designed a mobile terminal where voice functions are no longer the main focus. "More computer than mobile phone," as Mikael Rindborg puts it.

Also new is the fact that Ericsson has developed an entirely open platform for the first time. Alongside the basic technical functions – GSM radio, GPS, Bluetooth and everything else – it runs on Symbian's Epoc operating system, which includes basic applications such as a calendar, address book and the ability to make simple notes.

For additional content, that will make the communicator an attractive alternative for future mobile phone subscribers, Ericsson will be relying on outside developers.

Just like an ordinary PC, the communicator can be loaded with software developed by third-party suppliers – specialized software companies.

That is one of the reasons why Ericsson developed the communicator, according to Mikael Rindborg.

"The communicator is a concept product that will not go into commercial production," he says.

"Optimal operation of the communicator requires the higher speeds that GPRS and HSCSD will offer. Our intention was to merely show that we're a player and to show what kind of products we will be focusing on. When we unveiled the communicator at CeBIT, it was a clear signal to software companies that it's time to start developing software for these kinds of terminals."

Eager to start

Availability of applications is key. They are what will create the added value that will convince today's wireless subscribers to use their terminals for functions other than voice.

Already, the communicator seems to have already inspired software developers. Considerable interest has been directed to the Developer Zone, Ericsson's Internet service that provides information about communicators. The PC-based development kit that Symbian will be releasing later this autumn is also likely to further increase interest.

"At Ericsson, we strongly believe in positioning services that utilize a terminal's GPS navigator, enabling people to find the nearest McDonald's, hotel or whatever," says Rindborg. "Another important area will be news services, which will be presented in a number of different ways, including sound, images and text."

Since CeBIT and the introduction of Ericsson's communicator, several companies have unveiled products within the same segment.

Microsoft and Samsung have advertised their smart phone, the Stinger, while Handspring has unveiled a GSM module that can be attached to the company's handheld devices. Motorola and Palm are also developing a similar solution. Even though there continues to be a convergence of data and telephony, Mikael Rindborg is not worried about competition from established handheld manufacturers.

"The strength of an Ericsson communicator lies in its ability to integrate telephony and data components. These components are developed in tandem and designed to support each other. Simply sticking or a telephone module will not provide the same results. Handheld device manufacturers will quickly realize that a good telephone application is nothing that can simply be thrown together. Our relationship with Symbian is also an advantage in this case."

Niclas Henningsson
freelance journalist

FACTS/COMMUNICATOR PLATFORM

Technology: The Communicator Platform is equipped with a full color quarter-size VGA screen. It has a GPS module and a Bluetooth radio link, IR and serial ports and a GSM radio. For telephone calls, the Communicator Platform is equipped with a speakerphone and the ability to connect handsfree accessories either via Bluetooth or by wire.

User interface: The Communicator Platform includes two options for entering text. It is equipped with the same handwriting recognition system as its little sister, the R380. Also, the communicator's joystick can be used to input text.

Software: The platform is equipped with Symbian's Epoc operating system and includes software for both HTML and WAP browsing. The Unified Messaging application administers an address book that includes telephone, e-mail, fax and SMS information, allowing the recipient the option of using what is most convenient at the moment.The basic applications include software to take notes, make lists, a calendar as well as numerous other functions.

Niche products to meet future needs

Internet access directly over mobile phones. That is Ericsson's vision for the future. New application areas are placing new demands, however. Terminals designed to meet the needs of future users are now being developed in Kista.

➤ Joakim Niléhn, of Ericsson Mobile Communications (ECS) in Kista, is responsible for the production of a relatively new niche within Ericsson's mobile assortment. His organization develops smart phones and communicators.

Smart phones, like the R380, and communicators, like the prototype Communicator Platform unveiled at CeBIT last spring, are the kinds of the mobile Internet devices that Ericsson envisions for the future. With large displays, touch screens and new, intelligent user interfaces, access to the Internet over a mobile phone will be simple and easy.

"Our terminals are the cornerstones for the kind of mobile Internet that the company has been advocating so hard for," explains Joakim Niléhn. "We anticipate significant growth in the next few years and are working hard to meet those growing demands."

Integrating telephony with handheld devices will unquestionably be important. Studies have shown that two-thirds of today's handheld device users would like a handheld that incorporated a built-in telephone.

New services are also driving developments within the mobile Internet. With applications for mobile banking, e-commerce, network gaming, news, positioning and numerous other services, subscribers are going to be enticed into using their terminals more for than just voice applications. Offering these new services will place great demands for collaboration among terminal developers, application developers and network developers.

"We have been involved in several collaborative projects on the systems side. Our common goal is for the services and terminals to reach the market simultaneously," says Joakim Niléhn.

Collaboration is proving interesting, not least considering the direction discussions have taken since the poor earnings results on the mobile side were announced this summer. In the future, simpler terminals will be developed and manufactured in collaboration with outside suppliers.

It is highly unlikely, however, that the terminals Joakim Niléhn and his colleagues are developing will be developed outside of the company.

If Ericsson is going to utilize its strong position on the system side, its terminal expertise will be required, says Joakim Niléhn, especially when it comes to more advanced terminals.

"That's the case. I would hazard a guess that it will be an absolute necessity, an opinion that management shares. We're focusing on complete solutions for networks of the future, which will require that we have the ability to deliver end-to-end solutions, on both the system and terminal sides."

Niclas Henningsson

vacancies AT ERICSSON

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

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

Contact No. 16 2000 **Updated October 6**

ERICSSON (CHINA) COMPANY LTD

AXE / GSM Product Manager

● *We are looking for a product manager* within the area of AXE / GSM for the China mainland market. The responsibilities for this position includes mainly software product management such as product planning, strategies, system impact investigations, customer presentation, product support, parameter handling etc.

The position also requires some line management activities for a small unit of 3-4 people as well as being functionally responsible for HW product management (which is now outsourced to Ericsson office in Nanjing).

The ideal candidate should have extensive background in AXE and GSM, preferably within software supply and/or support. Knowledge of AXE software supply processes is a clear advantage. The candidate also needs to be pro-active and be able to take important decisions.

The position is based in Beijing in the San Li Tun office (Stand-Alone FSC).

Contact: Dan-Erik Grobecker, danerik.grobecker@etc.ericsson.se or Patrik Forss, patrik.forss@etc.ericsson.se, +86 10 646 01122, Fax: +86 10 646 10167.

ERICSSON LTD. GUILDFORD U.K. – NEW PUBLIC NETWORKS

To meet the growing demands of the Orange account the following opportunities have been identified within the Orange Operations team. All roles are based in Guildford with travel required to customer, based in Bristol and Ericsson organisation based in Sweden and Germany. All positions report to Mark Guilfoyle, Programme Manager.

Customer Product Assurance Manager

(Ref 369)

● As a member of the operations team within the Orange Customer Facing Unit(CFU) you will take responsibility for all issues relating to product assurance arising from design & development through to implementation and operational service.

Key responsibilities: This is a high profile customer facing role with the opportunity for the individual to establish themselves as an authority within UMTS technology introduction.

The role of the Product assurance Manager will be to work within the team supporting the following: Establish Customer relationship and handle queries relating to Ericsson processes and practices. Work closely with the technology introduction activities liaising with Orange to establish a clear understanding of both customer requirements and product characteristics. Establish links with internal Ericsson organisations responsible for the development, verification, manufacture and supply of '3G' products specifically UTRAN (RNC, NodeB) and Support systems. Undertake assessment of third party suppliers in relation to contractual obligations. Initiate improvements within Ericsson based on customer needs and internal findings relating to the product, it's introduction and operation. Actively participate in technical review and project meetings with Orange. This is a senior role within the team and it is unlikely that someone with less than 10 years industry experience, 3 years quality management, would have the necessary experience to execute the role.

Key requirements: Good inter personal skills and extensive capabilities in the area of relationship management: Experience in the field of mobile radio telecommunications of at least two years: Experience of 'quality' management. Ideally you will have a detailed knowledge of recognised approaches to Quality; practical experience of associated tools and techniques (e.g QFD, FMEA.) and how these are applied during the product development process: Ericsson GSM BSS product knowledge.

Customer Solutions/ Product Manager –UTRAN

(Ref: 375)

● As a member of the customer solutions team, you will be focusing specifically on Radio Access, UMTS (RNC and NodeB.) The role of the Customer Solutions / Product manager would be to work within the team supporting the following: Feature and functional specifications. Work closely with the technology introduction activities liasing with Orange to establish a clear understanding of both customer requirements and product capabilities. Deal With Technical queries with existing and future product issues. Actively participate in technical review and project meetings Orange. Support Orange in their migration from a 2G to a 3G network. Establish and manage a customer 'roadmap' liasing with Ericsson Strategic Product Management and other France Telecom accounts. Remain up to date on regulatory issues and competitor developments

Key requirements: Good inter personal skills and extensive capabilities in the area of relationship management. Experience in the field of mobile radio telecommunications of at least two years. Experience of product management.

Ideal Requirements: Detailed knowledge of GSM BSS hardware and software: Ericsson GSM BSS product knowledge. An understanding of GSM, GPRS, EDGE and UMTS requirements. IP Technology (including Mobile IP) IP/ATM Transport Technology

Contact: Helena Leach HR Advisor: helena.leach@etl.ericsson.se.
Application: myfuture@etl.ericsson.se.

5 X Snr & Data Transcript Engineers

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

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

Qualifications and experience: Essential; At least 2 years experience of Data Transcript in AXE 10 environment preferabally CME20, or other proven testing/switching/support experience. Computer literate. Able to travel within the UK and overseas on occasion.

Desirable; Higher technical qualification in telecom, radio or software related subject. Working knowledge of Ericsson procedures and experience in Data Transcript tools development.

Contacts: Mark Phillips, Data Transcript Group Supervisor, +44 1483 407375, mark.phillips@etl.ericsson.se.

L.M. ERICSSON A/S, DENMARK

System Engineers Product development in core products. Ericsson has become one of the world's leading companies within telecommunications, because we believe that individual opportunities for personal development is the prerequisite of success. We make heavy demands on initiative and results - and expect a professional attitude to the tasks. In return the challenges as well as personal and professional opportunities for development are countless in a global network organisation with more than 100,000 employees.

CAPC Network and Control (CAPC NS&C) in Copenhagen is responsible for products, which are an important part of the controlling infra structure in the existing Telephony network and the coming 3G networks (UMTS/NGS). Our products Intelligent Networks and Traffic Control (core products) are installed around the world and they are being further developed in the 3G networks.

In order to consolidate our position we need a number of System Engineers with a driving result oriented and professional attitude. We are looking for System Engineers to two different tasks, System management and Technical Coordination.

System Management

● As System Engineer doing system management your primary task will be to perform system studies and source system design. You will be working in a group of System Engineers with focus on system design, evolution and characteristics of core products, as well as ensuring further deployment into design projects. You will participate in product committees and coordination towards other Ericsson Product Areas.

Technical Coordination

● As System Engineer responsible for technical coordination your primary task will be to establish and organize the overall technical coordination in a main project with several subprojects. The tasks will be to ensure technical coordination of issues related to the source system and to the evolution and characteristics of core products existing as well as their evolution towards 3G UMTS.

Professional Qualifications: A background preferably in Science, Engineering or equivalent would be an advantage.

Knowledge of one or more of the following would be an advantage: Telecommunication and Data-communication Services. System engineering in complex real-time computer systems. Telephony network and architecture i.e. call handling and call control. Intelligent Networks. IP architecture based on protocols H.323 and SIP. Experience in AXE design is a definite advantage, but not a requirement.

Personal Qualifications: You have self-confidence and believe in your own ideas. You are prepared to take responsibility for driving technical studies. You are curious and find new technologies a challenge. You are result oriented.You enjoy working in an international environment. You are self-motivated, and open towards changes and have a positive attitude with a good sense of humor. You like to initiate and to follow up the started activities (being catalyst).

Ericsson offers: You will be working in an international and professional environment, where you will have an influence on your own job and career opportunities. We offer a competitive salary and attractive employment terms. Travelling will be part of the job and will provide opportunities of developing international relations and networks.

Contact: Senior Group Manager, Niels Jørgen Bay Jensen, +45 33 88 33 93 or Dept. Manager Kaj Pedersen, +45 33 88 35 70.
Application marked 200106HR3: L.M. Ericsson A/S, Sluseholmen 8, 1790 København V, Denmark, Attn: Human Resources.

ERICSSON NV/SA, BRUSSEL, BELGIUM

Solutions Manager

● If you have previous 2G experiences from e.g. our European markets and are willing to support the current 3G race as it unfolds in Belgium and Luxembourg, then you are very welcome to join our New Accounts, in charge of UMTS greenfield operators for Belgium and Luxembourg and for break-ins with existing operators in Belgium.

Duties & responsibilities:Supporting the Key/New Accounts in preparation of 3G Technical Proposals including Equipment/Node Dimensioning and Technical SoC. Support the Key/New Accounts in their efforts to carry out joint work with existing/potential customers for securing 3G licenses. Providing competence and knowledge in areas of 3G where the Key/New Accounts are lacking such competence (service networks). Act as a catalyst to ensure 3G competence build-up to a suitable level in the individual Key/New Accounts.

Qualifications & experience: A degree in Civil Engineering or equivalent. Minimum 4 years of working experience in GSM (2G). General experience in (Local) Product Management and/or technical pre-sales work. Good technical understanding of 3G. Customer oriented and in possession of good communication skills. Very strong result orientation. An excellent command of the English language.

Contact: P. Remans, HR, petra.remans@-ebr.ericsson.se or F. Meirsman, Director New Accounts, freddy.meirsman@ebr.ericsson.se, Raketstraat 40, B – 1130 BRUSSEL, Belgium.

ERICSSON MEXICO, CUSTOMER SUPPORT SERVICES

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? Well, then You should consider joining our team! The Competence Center TDMA-2 is now looking for:

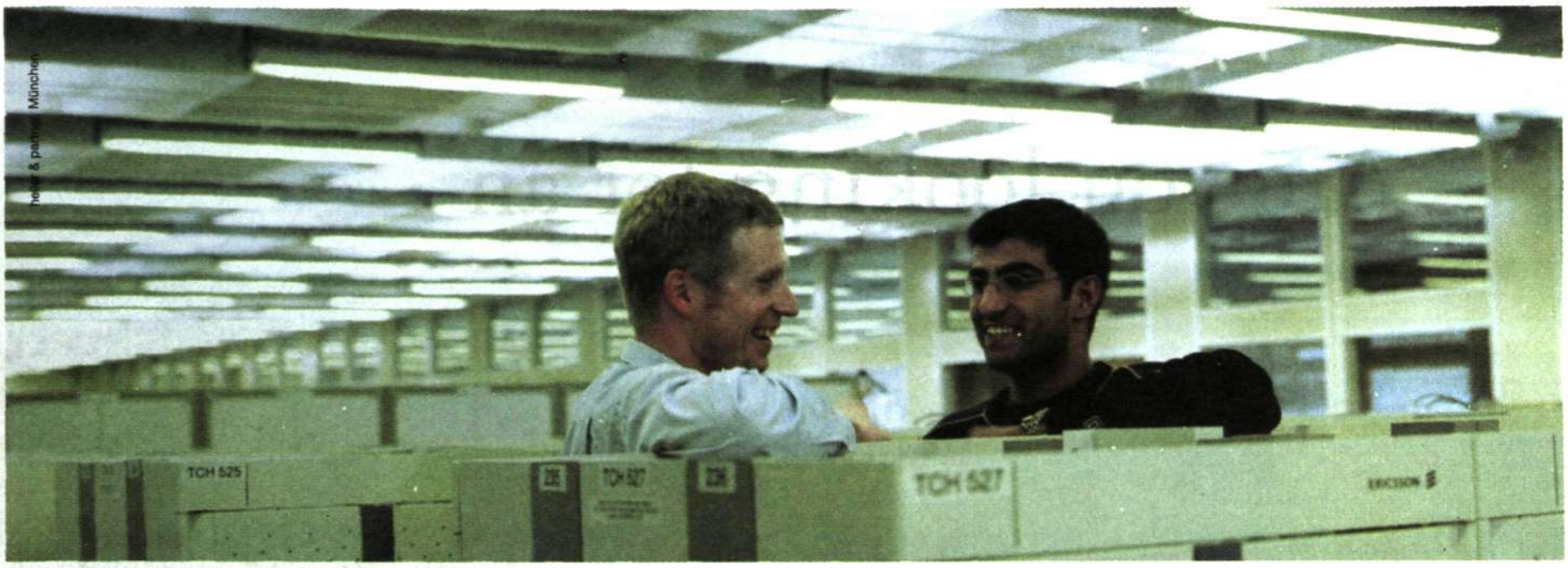
TDMA AXE Troubleshooters

● The TDMA system support organization in Mexico is urgently seeking experienced AXE troubleshooters in all areas covered by the MSC (such as Group Switch, Signalling, Call Delivery, Charging, Radio, APZ 212 40, APG 40 ....). 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.

As part of our organization, 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 Corrections when required, and travel to site if necessary.

You are an ideal candidate if you have extensive experience with the APZ/APT hardware and software used in MSC, in either a testing or support environment. We are also interested in persons with a solid, general knowledge of the AXE 10 platform. You also have experience with tracing in live echanges using Test System, as well as a good understanding of PLEX and ASA. You possess good communications skills, both written and verbal. It is essential that the candidate be fluent in English, and knowledge of Spanish is a plus but not a necessity. Both short term and long term contracts are available.

Contact: Peter Eliasson, Sr. System Expert, TDMA-2, Peter.Eliasson@-am2.ericsson.se, +52 2169 1512.



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 Node Product Unit MSC and Core Product Unit Application Core (CAPC). This includes Product Management, Systems Management, Project Management and Performance Management (Processes, Methods, Tools and Quality). Close to 900 employees from more than 40 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.

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; System Management Interface for Market activities; Core Network related Standardization; Operation & Maintenance.

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 5 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 this position. Knowledge of mobile Telecommunications 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.

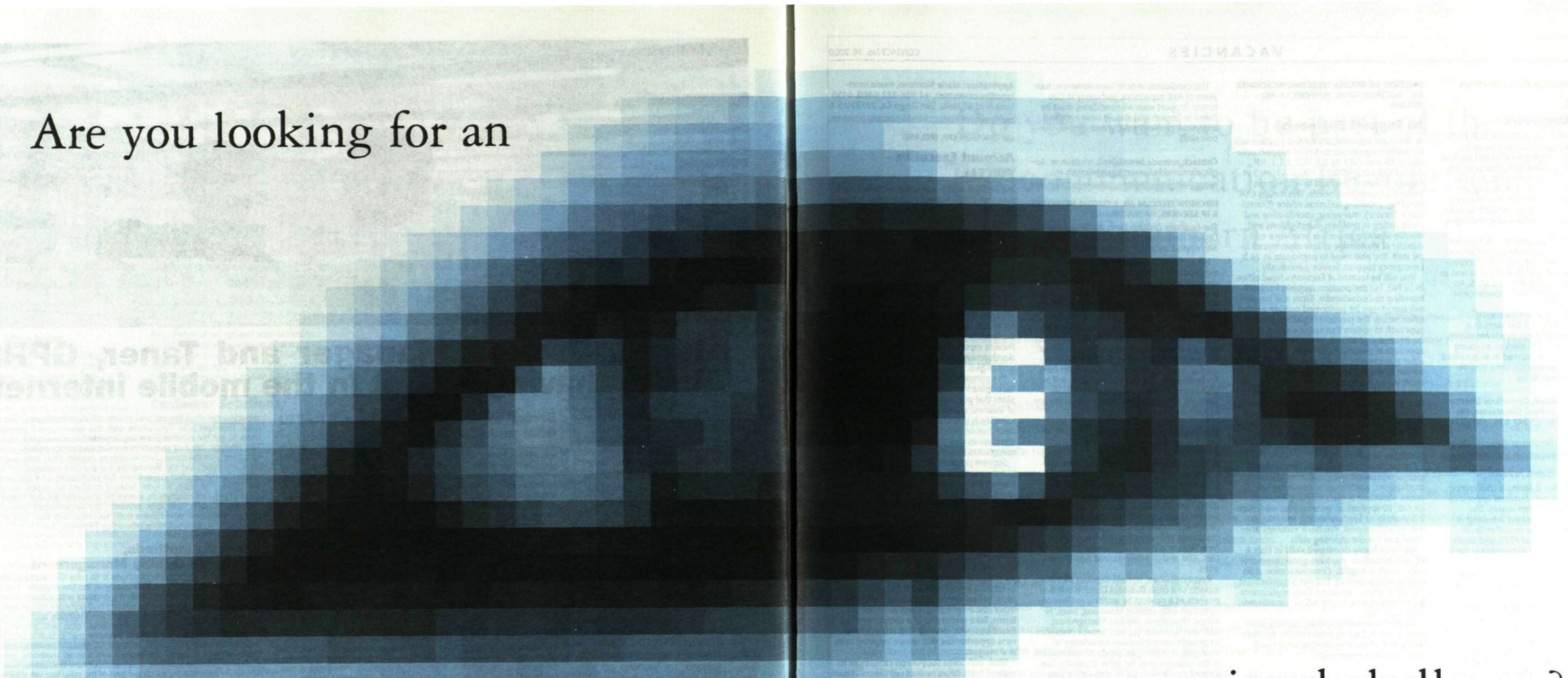
For further information about our open positions please visit our homepage:
http://www.eed.ericsson.se

Please contact

Ericsson Eurolab
Deutschland GmbH
Herzogenrath/Aachen,
Germany
Human Resources
Simon Seebass
Dial +49 2407 575 163
eMail:
Simon.Seebass@eed.ericsson.se

ERICSSON

Are you looking for an



exceptional challenge?

Come and join one of the largest e-business platforms in our business, on a temporary basis. Welcome to Stockholm!

We need You! You need us!

Joining Ericsson's e-business platform program will base you firmly in the common platform for all Ericsson e-business initiatives. In addition you will be a partner developing and designing the e-business solutions of the future.

Any company within Ericsson intending to actively participate on the Internet will use the ericsson.com portal. To be a partner in our team for a while could be a smart investment for your business.

Why not get actively involved in our common challenge – capturing the coveted position as the "Mobile Internet's undisputed market leader"!

And of course spending some time in Stockholm won't hurt you!

Many posts to be filled

- **IT ARCHITECTS** with good technical skills, analytical talent for designing and specifying e-business solutions.
- **DESIGNERS** with knowledge in the following areas: Web sphere, Domino, DB2, OS390, Net commerce, MQ series and Java.
- We are also looking for many **TEST PEOPLE**, such as: Test managers (TM), Test scenario writers (TSW) and Test executors (TE). Support like: Test Tool Team (TTT), Defect manager (DM), Technichal Team (TT) and System integration test co-ordinator (SITC).
- We also require many **OTHER COMPETENCIES** at the moment. You can find a list with examples of jobs at: http://rekryt.ericsson.se/intranet/go/off/publicer/dataisit/121.htm

Goals for the program

The ultimate goal of the e-business platform program is: To make e-business "business as usual". To enable customers, suppliers and stakeholders to interact efficiently and effectively with Ericsson over the Web. Ericsson can realize substantial business benefits from this!

Using a series of business-led projects and sub-programs, the program is responsible for providing e-business applications that will run on a managed platform. This will allow Ericsson to develop more cost effective business solutions, more cost effectively and giving greater customer satisfaction.

Where are we?

The program has delivered a comprehensive e-business architecture and successfully delivered a pilot e-commerce application for Enterprise Solutions Segment.

Currently the program is planning and implementing the migration of many of the existing disparate services to the new platform. It is also creating an enterprise portal known as ericsson.com. This will serve as a unified access point to Ericsson information and services.

You can find more information about the program at http://ebusinessplatform.ericsson.se/

Please e-mail your application with CV to:
recruitment@edt.ericsson.se

ERICSSON

The platform for e-business@ericsson.com

ERICSSON YUGOSLAVIA D.O.O, BELGRADE

Technical Support Engineers

● for Mobile Networks MSC/HLR/SCP. Ericsson in Belgrade, Yugoslavia, is looking for Technical Support Engineers who will work to support the AXE nodes and related products as used in the GSM networks. You will support our customer in trouble shooting of problems in supported systemsbut the most important task, is to help us to build up competence in this area for our young and highly motivated local staff.

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

We'd like to see that you have excellent communication skills and can work in a multinational environment as a team player.

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

Contact: Divna Vukovic, Operations Director, +381 63 218 034 or Pauli Liimatainen, Human Resource, +381 63 247 826, +381 11 311 3899.
Application: pauli.liimatainen@eyu.ericsson.se

ERICSSON SOUTH AFRICA PTY LTD.

Ericsson South Africa is facing a challenging future, with several new business opportunities in the Southern African region. The telecommunication industry is booming. A 3rd license is about to be issued in South Africa, and privatisation of PTT's and issuing of new GSM licenses are happening in the region.

We are working in an environment where we need to both develop existing – and also build future accounts. We are driven by our existing GSM customers that aim to expand into new areas as well as new markets.

The 3rd operator will challenge the existing two incumbent operators, MTN and Vodacom. Ericsson S.A. is looking for two experienced Key Account Managers, to head the 3rd operator – and the Mascom/Econet accounts respectively.

Key Account Manager 3rd License

● The 3rd cellular operator in South Africa will be an innovative player who will focus on the youth market segment with services like mobile internet and pre-paid for some 2 000 000 subscribers. We need an experienced KAM who will drive the operator to success.

To make this possible, the KAM will establish a new division which will have its own resources such as departments like Marketing & Sales, Project, Solutions and System Support. The KAM reports to the Managing Director of Ericsson South Africa and will be a member of the management team.

Key Account Manager, Econet and Mascom

● Mascom and Econet are GSM operators in Botswana and in Zimbabwe with approximately 100 000 subscribers each.

Econet also has an office in Johannesburg which is the centre for their expansion into new markets, in the data, wireline and in the wireless areas.

The KAM will lead a highly committed account team with a very close customer relation. The role involves both developing the existing accounts, and also assisting our customers to expand into new markets.

The KAM reports to the Managing Director of Ericsson South Africa and will be a member of the management team.

Experience & Qualifications required for both positions: Good leadership & managerial abilities. Solid understanding of the telecommunications industry. Working with customers within Ericsson for a minimum of 3 years. Excellent interpersonal skills. Strong understanding and respect of cultural diversity.

Contact: Robert Rudin, 3rd License, +27 11 283-2247, robert.rudin@esa.ericsson.se or Hans-Olov Rauman, Mascom/Econet, +27 11 283-2068, hans-olov.rauman@esa.ericsson.se or Nadia Radjoo - HR Officer, +27 11 283-2178, nadia.radjoo@esa.ericsson.se.

ERICSSON DE BOLIVIA TELECOMUNICACIONES S.A., ERICSSON LOCAL SUPPORT, LA PAZ - BOLIVIA

NI Support Engineers

● The main responsibility for this position will be performing various technical support activities in NI area (SCF IN 2.3, PCC 2.1.1, NP 2.2.1, PRM 2.2.2, VOT 2.2, ING 2.2.1, etc.) at highest technical level and to address customer's expectations/needs. This means CSR handling, providing technical advice (Consultation Service), managing, coordinating and participating in problem investigations and trouble-shooting as well as assistance and transfer of knowledge to less experienced local staff. You also need to participate in 24 h Emergency Support Service periodically.

You will be located at Ericsson's head office in La Paz, but the position requires frequent travelling to Cochabamba. Work and travelling will sometimes be performed outside normal office hours. The position requires a proactive approach to ensure that specifications, time, quality and cost objectives are met. The same approach is required to provide support to other members of the team in cascading expertise and also to seek advice from EGS in order to resolve technical issues.

You will also attend customer meetings, produce progress reports, implement corrective actions, perform updates/upgrades and carry out product maintenance tasks if necessary. The position is available from January 15th, 2001 for a duration of one year with possibility to extension.

Competence requirements: University degree or equivalent qualification in telecommunications, electronics or computer sciences. Minimum 3 years working experience on AXE 10 application systems plus minimum 2-3 years in NI Services testing and integration or/and support. You have excellent analytical and trouble shooting skills.

You have highly developed skills in Unix & PC administration. You have good communication skills in English. Communication skills in Spanish are desired, but not a requirement. You are customer oriented. Only applications from Ericsson employees will be considered for this position.

A continuous learning style, learning from experience and taking responsibility for identifying and addressing development needs are of outmost importance.

Contact: M. Tavakol, Customer Services Manager +591 2 312233, mohsen.tavakol@ericsson.com or Eva Moberg de Vargas, HR Mgr, +591 2 312233, ebbevva@am2.ericsson.se.

ERICSSON TELECOMUNIKASYON A.S, TURKEY

Support Engineers and Trouble Shooters

Ericsson has been active in Turkey for over a century. Ericsson Turkey is a leader in telecommunications in Turkey, with a reputation for advanced systems and products for fixed-wire and mobile communications in both public and private networks.

Ericsson Turkey serves the mobile phone market through the GSM system it installed for Turkcell and retains a dominant share in the competitive market for mobile phone models.

We are active in the export market with projects in Iran, Pakistan, Middle East, the Caucasus and the Central Asia and is implementing GSM networks in Azerbaijan, Georgia, Kazakhstan and Moldova. Based in Istanbul, with representation and operation offices in Ankara and site offices in ten cities, we are determined to provide communication solutions that meet our customers' opportunities and needs through innovation, customer orientation and technical superiority.

● Ericsson Turkey is looking for Support Engineers and Trouble Shooters to supplement existing FS staff with short orlong-term contracts to support our growing market needs.

The objective of the job is to provide technical support in one or more of the system nodes that are operational in the customer network such as HLR, MSC/VLR, MIN, BSC. The position requires close relationship and interaction with the customer, strong technical background that enables you to conduct fault analysis, trouble shooting and program correction handling in an efficient manner.

The candidate will play an active role in providing support and advice to the local engineers. The main duties also include solving of problems occurred on live exchanges and buildingup the local competence.

The candidates should have minimum four years of AXE experience preferably in Customer Support area. All candidates must be fluent in English and should have excellent analytical, problem solving and communication skills.

Contact: mesude.besen@enk.ericsson.se. Application:melda.kursun@enk.ericsson.se

ERICSSON TELECOM AB, DATACOM NETWORKS & IP SERVICES, NACKA STRAND

The business Division Data Backbone and Optical Networking is responsible for data and optical communications and IP services.

We are now launching a number of exciting products and network solutions that are dramatically changing the way telecom networks are implemented. Within our organisation, there is a strong competence, both technical as well as commercial.

Long-term, you will be able to find lots of opportunities – whichever way you choose to go we will support you in your development. We are located in Nacka Strand, with an inspiring view over one of the Stockholm harbor entrances. Some of the positions will be USA based including Silicon Valley, Santa Barbara, San Diego and Washington. We are looking for a

Solutions Manager, Launch Projects

● The position is in the Cross Business Division Solutions group within Division Data Backbone and Optical Networking (DBO), working across both Division Mobile Systems (DMS) and Division Multi-Services Network System (DMN). Its primary function is to ensure that Ericsson succeeds in providing our customers with complete solutions in the New Telecoms World of converged technologies, ATM and IP networks and new IP services.

Responsibilities: To hold together all DBO aspects of a cross Business Division solution projects as a product by working in close cooperation with existing Marketing, Sales, Finance, Operations, Product Management, R&D and Technical Support Service resources. To provide comprehensive knowledge of emerging technologies, products and services in the datacom area for other Division's Customer Launch Projects. To stimulate a new 'Ericsson Packet Core' culture into the current wireless and wireline environment within the organisation. To facilitate new/changed launch process development as required. To facilitate inter-working across the different divisions at all levels.

Qualifications: Degree in Engineering or equivalent. Project Management experience. Datacom/IP knowledge. Planning skills. Well developed management skills and experience. Strong internal network and understanding of Ericsson processes and ways of working.

Contact: Susan Hicks, +46 8 422 0938, susan.hicks@etx.ericsson.se orBritt Alexandersson, HR, +46 8 422 1258.
Application: please sent a copy to Susan: Ericsson Telecom AB, NA/ETX/D/H Marie Nordin, 131 89 STOCKHOLM, marie.nordin@etx.ericsson.se.

ERICSSON WIRELESS COMMUNICATION INC, SAN DIEGO, USA

Project Managers and Technical Team Leaders

● Experienced Project Managers and Technical Team Leaders Required for 3G/cdma2000 Development in San Diego California. The BSC SW development organization within EWU is looking for experienced project managers and technical team leaders to lead the development of the new generation BSC (ngBSC) projects for cdma2000 including 1XRTT and HDR. The BSC will be part of a major product line that will enable Ericsson to offer a complete 3G portfolio.

The work offers a golden opportunity to work in a team with high level of technical competence in a major new development. The software which is mainly written in C++ and Java is being developed for the Cello platform. For people involved it offers great opportunity for personal and professional growth in a dynamic and creative environment. Available positions in current and future phases for ngBSC include: Senior Project Managers. Technical Coordinators. Test Coordinators. Configuration Managers. Quality Coordinators. Product Introduction Coordinators.

Application: Maria Montano, maria.montano@ericsson.com, +1 858-332-6460, 6455 Lusk Blvd #E359U, San Diego Ca, 92121U.S.A.

LM ERICSSON LTD, IRELAND

Account Executive - EIRCELL

● This high profile account is working to ensure that Eircell maintains its market leadership, through the deployment of innovative solutions and services. You will be expected to achieve and/or exceed orders, sales, margins and other key targets as appropriate to the account.

Reporting to the Key Account Director – Eircell the Account Executive is responsible for themanagement and expansion of the existing customer business towards Eircell.

This includes: Account Management ownership of a number of products and solutions for Eircell. Identification, development and successful closure of business opportunities. Provide input for new product and feature development. Achievement of Sales and Margins targets.

The primary tasks and responsibilities are: Participate in the development of strategic plans that position Ericsson to take advantage of business opportunities. Identify and initiate sales leads that create opportunities for business that supports Ericsson's strategic sales direction as well as meeting customer requirements.

Support proposal and quotation process to secure new sales and/or defend Ericsson's market share. Develop customer business cases to include business case planning and analysis for business solutions opportunities. This includes determining business value to Ericsson and the customer. Support contract negotiations through entire process, proactively working with the customer, defining contract terms, and successfully closing the sale with some guidance.

Participate as a Key Account Team Member to address key issues that impact profitability, technical requirements, risks and ability to meet customer expectations and contract terms. Take ownership of a component of the Eircell business, develop and achieve business opportunities that secure targeted sales and margins.

Work with Sales Support on campaigns to expand sales opportunities with Eircell. Leverage customer relationships to facilitate the development of business opportunities for other Ericsson business units. Meet Ericsson quality goals and ensures ISO compliance within own area of responsibility

Candidates will be educated to Degree level or will have a minimum of three years experience in the telecommunications or Datacoms industry. Knowledge of Ericsson products, systems and services preferred. You must also possess excellent analytical, relationship building and negotiation skills.

Application: Margaret Gaffney, Recruitment Executive Manager, LM Ericsson Limited, Beech Hill, Clonskeagh, Dublin 4, Ireland, margaret.gaffney@eei.ericsson.se.

BUSINESS COMMUNICATIONS SOLUTIONS CENTRE, DUBLIN

Customer Support and Integration Test Engineers

● We are looking for experienced "Customer Support and Integration Test Engineers" to support our Product Portfolio in Business Communications Solutions Centre.

The key responsibilities are but not limited to: To provide technical support to the sales team in Customer meetings for such issues as hardware, software specifications and dimensioning issues. To support Field Trials of BCSC products. Participate and deliver demos of our products in our Demo site or on Customer premises. Handle Prototype testing and full integration testing of Business Communications solutions which will include sourced products.

Technical Areas Covered: GSM, Local Switching, ISDN, PBX Interworking protocols (QSIG, DSS1, DPNSS), IN, VPN, ATM & IP & Off-Switch Web applications.

Reporting: The customer Support and Integration Test Engineers will report to the Customer Support manager.

Skills Required: Minimum 3 years experience in AXE including Protocol Testing. Customer Support / Trouble shooting experience is desirable. Good Customer facing ability is essential.

Do you want to be part of the Telecommunication Revolution in Southern Africa?

Ericsson South Africa is facing a challenging future, with several new business opportunities in the Southern African region.

The telecommunication industry is booming. A 3rd license is about to be issued in South Africa, and privatisation of PTT's and issuing of new GSM licenses are happening in the region.

We are working in an environment where we need to both develop existing - and also build future accounts. We are driven by our existing GSM customers that are aiming at expanding into new areas as well as new markets.

The 3rd operator will challenge the existing two incumbent operators, MTN and Vodacom. Ericsson S.A. is looking for two experienced Key Account Managers, to head the 3rd operator - and the Mascom/Econet accounts respectively.

Key Account Manager
3rd license

The 3rd cellular operator in South Africa will be an innovative player who will focus on the youth market segment with services like mobile internet and pre-paid for some 2 000 000 subscribers.

We need an experienced KAM who will drive the operator to success. To make this possible, the KAM will establish a new division which will have its own resources for Marketing & Sales, Project, Solutions and System Support.

The KAM reports to the Managing Director of Ericsson South Africa and will be a member of the management team.

Key Account Manager
Mascom and Econet

Mascom and Econet are GSM operators in Botswana and in Zimbabwe with approximately 100 000 subscribers each. Econet also has an office in Johannesburg which is the centre for their expansions into new markets, in the data, wireline and in the wireless areas.

The KAM will lead a highly committed account team with a very close customer relation. The role involves both developing the existing accounts, and also assisting our customers to expand into new markets. The KAM reports to the Managing Director of Ericsson South Africa and will be a member of the management team.

Experience & Qualifications required for both positions:

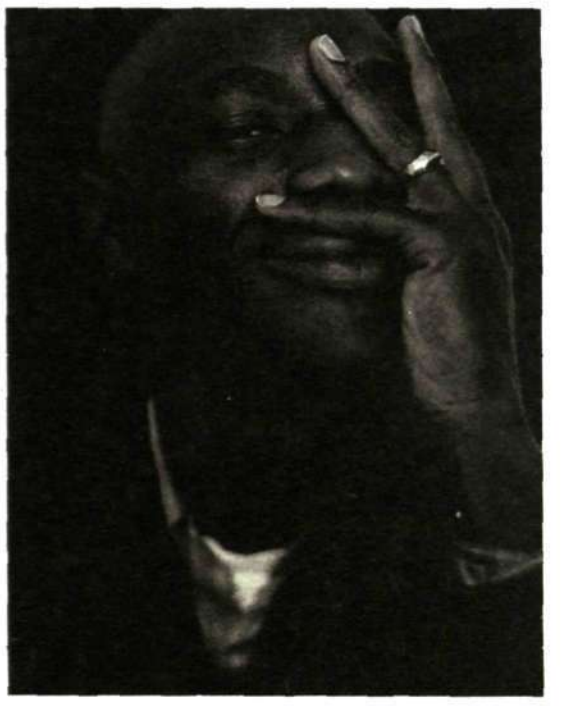
- Good leadership & managerial abilities
- Solid understanding of the telecommunication industry
- Working with customers within Ericsson for a minimum of 3 years
- Excellent interpersonal skills
- Strong understanding and respect of cultural diversity

For further information, or to apply for any of these positions, please forward your correspondence to:

Robert Rudin – 3rd License
T: +27 11 283-2247
e-mail: robert.rudin@esa.ericsson.se

Hans-Olov Rauman–KAM Mascom/Econet
T: +27 11 283-2068
e-mail hans-olov.rauman@esa.ericsson.se

Nadia Radjoo – HR Officer
T: +27 11 283-2178
e-mail: nadia.radjoo@esa.ericsson.se



Make yourself heard.

ERICSSON

Publicis Jhb 7021

Contact: Gerry.Brennan@eei.ericsson.se, 087-2323307 or Jonathan.Prytherch @eei.ericsson.se, 087-2231408.
Application: lorna.Mulvihill@eei.erics-son.se, HR, Radio House, Belfield Office, Clonskeagh, Dublin 4, Ireland.

DALIAN ERICSSON COMMUNICATION COMPANY LTD.CHINA.

2 O&M Support Engineers

● The GSM network in China grow up rapidly and more and more service we will provide to customer. The main responsibility for this position will be to Operation and Maintenance GSM network AXE switch at highest technical level. Provide customer DT management, identify and solving fault, troubleshooting. Setting for disturbance, congestion and supervision of STS. AXE switch Health check. Network traffic management.

Competence requirements: minimum 4 years working experience on AXE 10 GSM network. You also have excellent trouble shooting skills and good service mind.

The Candidate must have good English skills and communication skills with customer. Frequently travel are required. Only applications from Ericsson employee will be considered for this position.

Contact: Jim Wen, Operation Deputy Director, +86 411 3676600, Jim.wen@dec.ericsson.se

TELEFONAKTIEBOLAGET LM ERICSSON, SAUDI ARABIA BRANCH, RIYADH

Local Product Managers (LPM) to the Kingdom of Saudi Arabia. Are you looking for a challenging and demanding position working with a high prioritized and one of the top market within Ericsson?

We at the Key Account organization consisting of young and adventurous team-workers, are currently looking for two more Local Product Managers

Local Product Manager for Transmission Solutions

● We are in need of a LPM to be responsible for transmission solutions both for GSM access and backbone network. The solutions to be covered include both PDH and SDH solutions, e.g. Mini-Link, DXX, Mini-DXC, SDH Multiplexer and SDH microwave radios. Also the coming IP- and ATM backbone for 3G network are included.

Local Product Manager for BSS (Radio) Solutions

● We are looking for a LPM with a great knowledge about our current GSM radio solutions in the core BSS, BTS and antenna related products. You are also updated with the new solutions coming with WCDMA and our other innovative radio solutions.

For both positions, we are expecting that you are currently working with one or more of the related product areas either as a system designer or product manager. You are used to meet customers and feel comfortable to conduct presentations promoting our solutions towards customers. You have ability to communicate our messages towards customers both verbally and in writing, also enjoy working in an international team with many ideas.

Experience from a position, as Local Product Manager is a plus as well as from mobile network design.

We are living in a nice compound with access to different sports and recreation activities including golf, tennis, bowling, swimming pools, fitness facility, Cinema, etc.

If you have children in school age, then you can choose between the Swedish (the biggest Swedish school outside Sweden), the English or American school.

Contact: Kriengsak Bunpuckdee, +966 1 218 0444/110, +966 544 37 827 or Jan P. Moen, Key Account Mgr, jan.p.moen@-era.ericsson.se, +966 1 218 0444/109, +966 544 37 838.
Application: K. Bunpuckdee, Techn. Mgr, kriengsak.bunpuckdee@tks.ericsson.se.

ERICSSON K.F.T. HUNGARY

The IP Network Services Development Unit of the R&D division is looking for

User Interface Designers

● Your tasks: Designing user interfaces for the management of next generation telecommunications networks. Identifying requirements, developing the user interaction model, proposing design solutions, creating prototypes and writing specifications. Developing prototypes through a rapid iterative design process that incorporates feedback from both usability testing and team members. Communicating how your design works-through process flows, prototypes or other means-to the developers who will build it.

You possess: A solid foundation in user interface design principles, practices and tools. The ability to understand the needs and requirements of the user, and translate them into use cases. The ability to apply GUI design principles and heuristics without being biased towards any particular language or development environment. Demonstrated expertise in designing and implementing graphical user interfaces.

A degree in Human Factors, HCI, industrial design, or another discipline related to UI design (or equivalent experience). Excellent communication and interpersonal skills and proven ability to effectively collaborate within a cross-functional team. Fluency in English.

Advantages: Experience in telecommunications, TCP/IP, or related areas in data communications.

Application: sandor.albrecht@eth.ericsson.se or kata.gruik@eth.ericsson.se

TELEFONAKTIEBOLAGET LM ERICSSON, TECHNICAL OFFICE, SYRIA

Technical Support Manager

● Excellent support in all phases of business is the key to customer partnership and future sales.

We are seeking a qualified person to head the department of Technical Support, IS/IT, Security, Operation & Maintenance and to provide technical assistance to the Marketing and Projects departments. The successful candidate shall report to the Operations director.

Qualifications: the candidate should have at least 7 years telecommunications experience out of which 5 years in a support department and at least 2 years of managerial experience. He/she should have wireline experience as well as GSM.

He/she should have a broad technical experience, product knowledge, documented leadership skills and ability to provide a good working environment. Thorough understanding of the support and supply is vital.

The successful candidate should have sound analytical capability in order to contribute towards build up of local competence.

Application: Hussein Qattan, +963 11 61 3028, fax: +963 11 611-3138, hussein.qattan@net.sy.

NIPPON ERICSSON K.K. – OSAKA, JAPAN

Customer Project Manager

● As Customer Project Manager you will be responsible for planning, managing and monitoring our projects within specified goals regarding time, quality, cost and functionality as determined in the assignment. You will guard the motivation of the project team, and you will be responsible for optimal customer satisfaction.

You should have several years' experience in Project Management and you should be familiar with AXE HW and/or AXE SW implementation projects.

Contact: Martin Sjöberg, Manager Project Support, Osaka, +81 6 6468-3219, martin.sjoberg@nrj.ericsson.se.

ERICSSON AUSTRALIA PTY. LTD

Test Engineer for IN Services

● ASAC (Advanced Services Applications Centre) is a service design centre that is part of Ericsson's global Intelligent Network design centres. ASAC has also positioned itself as a regional Intelligent Network competence centre for innovation and development in the Asia/Pacific. As we are continuing to expand, we need IN Service Testers. If you are successful in your application, you will receive training in relevant IN technologies and become part of the design and test team at ASAC.

As a Test Engineer for IN Services, you will be required to perform the analysis and planning of IN test activities and be responsible for the execution of the test plan. Key Accountabilities: Test analysis. Test planning. Preparation of test specification and test instructions. Leading/mentoring junior team members. Conducting test of IN services.

Required Competencies: Good AXE test experience. Good fault finding abilities (hardware/software). General telecomm knowledge. Unix experience. Good communication & team skills. Dynamic & results driven.

Experience in the following will be highly regarded, but is not essential: IN, IT or GSM testing. Knowledge of SMAS. Knowledge of Database. If you are looking for opportunities with IT related work and 3rd generation platform (JAMBALA) please

Contact: john.santopietro@ercisson.com.au or le.bui@ericsson.com.au. **Application** latest 001027: diane.barker@ericsson.com.au.

ERICSSON INC, US – CORE NETWORKS VERIFICATION, ASO DALLAS, USA

SYSTEM TEST: We provide system verification for CORE NETWORK applications used in North and South America. Core network verification includes cross platform verification of products including MSC Server, Media Gateway (MGW), and Core Network OSS (CNOS). Travel within the U.S. and abroad may be required for all positions.

Verification Engineer, Core Networks

(SEVERAL OPENINGS)

● The main responsibilities for this position will be to perform system test and troubleshoot software in the Core Network product area.

GSM/IN platform/UMTS testing and/or troubleshooting experience preferred. Experience in script development with MGTS or TSS2000 traffic generators is useful. Solid plex and ASA background required; in depth knowledge in the use of the Test System and writing ASA solutions is preferred. ISUP/SS7/MAP/INAP/IP protocols, ATM, C++, Cello platform knowledge, or CNOS knowledge is a plus.

Good communication and organizational skills required to an effective team member.

The candidate should have a Bachelors/Masters degree in computer science or electrical engineering and 3+ years experience in the verification of AXE systems.

Contact: Jerry Moffitt, CN Verification Group Manager, ASO Americas, Jerry.Moffitt@ericsson.com, +1 972-583-5433, +1 972-839-4803 or Dan Weed, CN Verification Group Manager, ASO Americas, Dan.Weed@ericsson.com, +1 972-583-5690, +1 972-489-0168.

SAUDI ERICSSON COMMUNICATIONS COMPANY LTD. SAUDI ARABIA

Project Manager Outside Plant

Saudi Ericsson Communications Company Ltd. (SES) has been contracted to manage implementation of cable networks in various locations around the Kingdom. We are seeking an experienced Network Manager for this job. The work consists of Civil work of manholes and hand holes, trenching and laying of ducts, laying of direct underground cables, pulling of cables in ducts, jointing of cables, installation of cross-connection cabinets and distribution points.

● You will lead a team of Network Supervisors and Network Design Engineers. Besides project planning your main work will be to design networks, specify and order materiel, coordinate and supervise subcontractors, and follow the tools and standards Ericsson uses to deliver with quality. Assignment is for at least one year.

Contact: Bo Wiklund, +966 1 478 5800 * 440, Bo.Wiklund@xks.ericsson.se.

ERICSSON GMBH, DUSSELDORF, GERMANY

GSM Support Engineer

● We are looking for support engineers with a minimum of 3 years AXE/GSM experience, specialized in either the BSS or the CSS area. You will be working with a young international team in one of the two sections 'Radio Access Services' (BSC/BTS/RNC) or 'Core Network Mobile' (MSC/MGW/UMSC). The sections belong to the unit 'Customer Support Services, Ericsson Services Mid Europe'.

You will be responsible for support and supply activities for the radio and core network part of GSM, UMTS, IP BSS and GSM on the Net. This involves customer acceptance tests, UMTS field trails, FOA, TR analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development.

Our customer in Germany is one of the strongest player in the Telecommunication business. Therefor it is one of your biggest efforts to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we have a very close contact to the development projects within Ericsson. This will give the successful candidate a great opportunity for personal and technical development and work with the latest GSM/UMTS technique. We also have our own training center in Düsseldorf.

You will be part of the 'Master Back Office' within ESME, which means that you will also support the other markets in mid Europe (Netherlands, Belgium, Switzerland and Austria) with your expertise. You should have a good knowledge of support/supply activities. You will play an active role in support of the existing network and testing of future releases. The position can be either expatriate or local employment.

Contact: Core Network: Mikael Strandberg, +49 211 5342359, Mikael.Strandberg@-edd.ericsson.se or Radio Access: Harald Taugs, +49 211 5342333, Harald.Taugs@-edd.ericsson.se.

DOMINICAN REPUBLIC – MU CARIBBEAN

Local Support Engineer

Market Unit Caribbean covers an area of 15 countries and 15 dependencies with some 27 million people. The telecom markets in the area is in the process of deregulation with a number of possibilities within mainly cellular and datacom networks.

● We have an interesting challenge for you within our new GSM contract in Dominican Republic. 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, Spanish is a plus.

We expect the successful candidate to start during October 2000.

Contact: Martin Paquette, ELS Manager, Arne Palmkvist, Operations Director, +1 787 771 1700.

MU CARIBBEAN

New Accounts Manager

Market Unit Caribbean covers an area of 15 countries and 15 dependencies with some 27 million people.

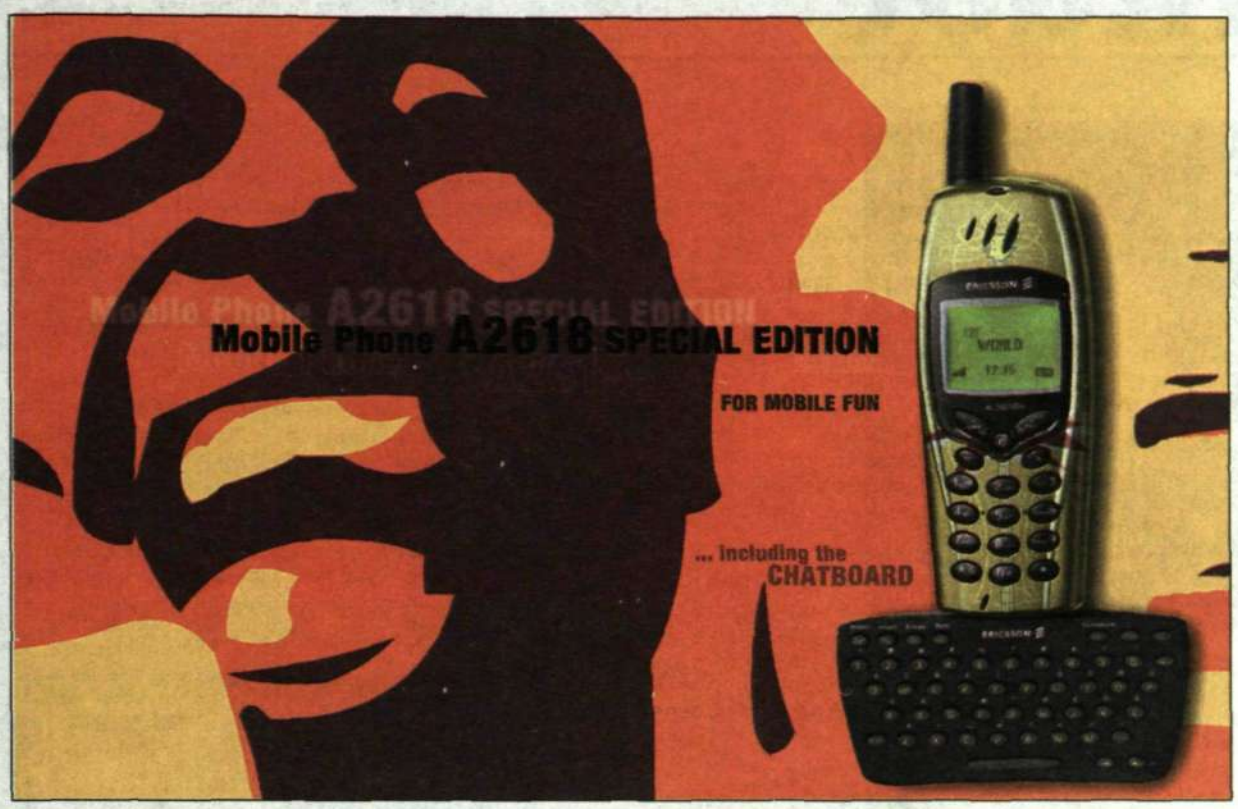
The telecom markets in the area is in the process of deregulation with a number of possibilities within mainly cellular and datacom networks.

● We are now looking for an experienced marketeer who can identify and initiate new business that support 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: BO Carlsson, President, +1 787 771 1700. Application: Noelia Borrego, HR Representative, noelia.borrego@ericsson.com.



For the first time, Ericsson is marketing its own specially designed phone. The jazzy look of the A2618 Special Edition is designed to lure young, musically oriented people to choose an Ericsson.

Phone gets jazzy look

Just in time for the MTV Europe Music Awards, Ericsson has launched a new special edition of its youth-oriented A2618 mobile phone, dressed up in elegant gold.

➤ "We want young people to make the connection between music, Ericsson, and MTV as soon as they see the special-edition phone in stores."

"This is one way of promoting Ericsson's involvement in the music awards at the consumer level," says Patrik Liljedahl at Product Marketing in Lund.

It also marks the first time that Ericsson has taken the initiative to develop a special-edition version of one of its own phones.

"In the past, we've only manufactured the telephones and let operators put together special packages. This is a pilot project, the likes of which I think we'll be seeing more of," says Patrik Liljedahl.

A limited number of the phones are being manufactured and sold in specially designed boxes, packaged together with a Chatboard.

The phone shell is gold in color with a stylized bass guitar on the front. A cool accessory for the music club look, no doubt.

Henrika Lavonius-Norén
freelance journalist

Tradition in helping

➤ On April 11 of this year, Ericsson Response went into operation – a comprehensive assistance program that Ericsson conducts in conjunction with the UN and the Red Cross/Red Crescent for areas struck by catastrophe.

The concept is nothing new, however. Ericsson has been lending a helping hand for a long time. This photo was taken in Naples, Italy in 1930, after an earthquake destroyed the city's telephone station.

Ericsson set up this temporary telephone. It is unclear, however, whether or not the soldier was eavesdropping or merely protecting the telephone.

Photo courtesy of the Stockholm Corporate Archive

ERIC & SON

Photo: Lars Åström

Ericsson moves into skyscraper

»» Tired of the view from your office window? That won't be a problem for Ericsson employees in Malaysia, who just moved into the world's tallest building, the Petronas Twin Towers in Kuala Lumpur.

The buildings are 452 meters high and Ericsson has offices on the 48th floor.

Facilities include a demo center for network and enterprise solutions as well as consumer-oriented solutions such as WirelessWallet.

Photo: Per Pettersson & Co Media

Sports fanatics get even more

»» *Ericsson Erisoft* is the subsidiary that is developing Arena, a service for sports enthusiasts that allows people to follow sporting events over the wireless Web via a laptop or handheld. You can select camera angles, view replays or even track the pulse of a particular player.

Sportsworld Media Group has installed the service in Melbourne and London, and is working with Erisoft to further develop the technology.

New hoax via e-mail

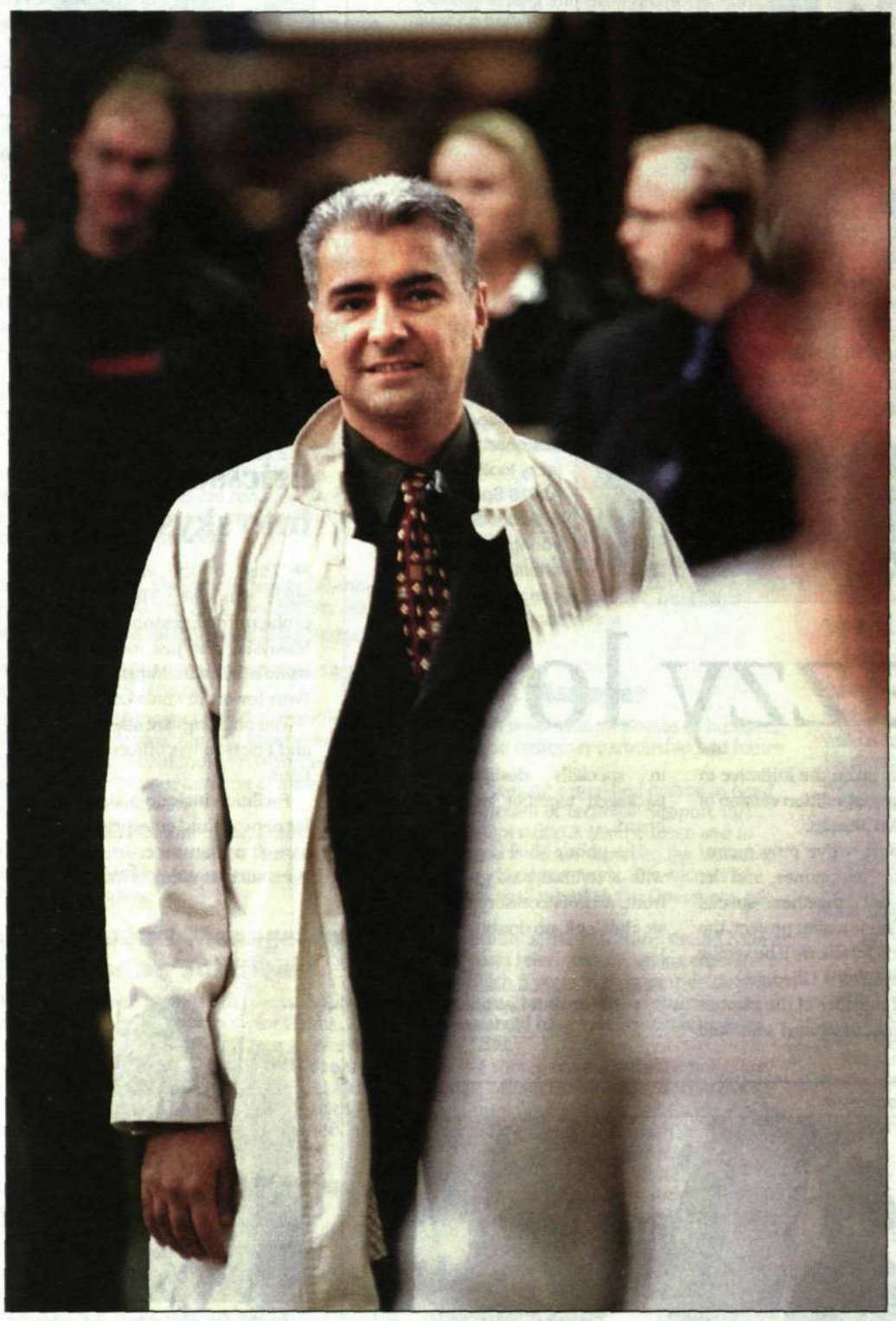
»» Once again, an e-mail hoax is being circulated promising free Ericsson telephones. The message states that if a person forwards the note on to eight other people, they will receive a T18 phone, or an R320 if they forward the offer to 20 people.

According to the hoax, you simply have to send a copy of your e-mail to Anna Swelund, who is allegedly a marketing director at Ericsson. There is, however, no Anna Swelund at Ericsson and this "marketing campaign" is a fabrication.

No. 16,
October 19,
2000

contact

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



David Saraby is the typical Ericsson employee. He stands out among from the statistics, which include 100,000 people.

Photo: Peter Nordahl

Man in the middle

The average Ericsson employee lives in Sweden, is male, 38 years old, an engineer, works in Kista and has been employed for eight years.

Contact located David Saraby – the man who fits the statistical average.

➤ Surprising and a somewhat strange in his opinion. No doubt he thought that the average Ericsson employee was Swedish.

"I don't know that I feel very typical," he says hesitantly. "I'm originally from Iran."

Nonetheless, he fits all the statistical parameters.

Currently he is settling into his new job as head of Radio Network Planning Tools at ERA. Previously, he was in charge of system management for GSM on the Net.

Does he have a feeling, after eight years with the company, of what is typically Ericsson?

"I believe that the three values that I learned about when I started here fit in quite good with the spirit of the company: professionalism, respect and perseverance. You notice respect by how people are treated individually, rather than based on their origins or gender. Professionalism means that you get to the bottom of all your problems, and perseverance means that you don't give up but keep working until you have found the best solution. 'Quick and dirty' doesn't work here."

Wife and house

But even though David believes that these values are useful both at work and in his private life, he isn't sure that he always manages to live up to them.

"No, I'm probably a little bit too goal oriented," he says and pauses for a moment. "I usually think up a couple of shortcuts for getting the results."

Let's look at how representative David is in other areas. He is married to Laleh and has a little 20-month-old son. The family lives in a house in Sollentuna outside of Stockholm, just a few minutes from Ericsson's offices in Kista.

David plays synthesizer and enjoys going fishing with his friends. Although, truth be told, it is the company and the coffee that are more inviting, than the actual fishing. During his free time David can also be found working in his garden.

"It's a lot of fun and sometimes physically demanding," he says. "I do the rough work and Laleh takes care of the detailed work."

Classic rock

He reads mostly technical books and subscribes to Illustrated Science. David likes all films with Robert DeNiro, but counts "Life is Wonderful" by Roberto Begnini as one of the world's best films. As far as music goes, he mostly likes classic rock with such groups as Pink Floyd, Led Zeppelin and Supertramp. The Swede Ulf Lundell is also one of his favorites.

David used to do a lot of boxing, but in recent years, he has not had the time. He has been a little better about playing basketball.

So, that is what the typical Ericsson employee is like.

Do you recognize yourself?

Maria Paues
maria.paues@pauesmedia.se

UPCOMING

October 18–20: World E-commerce Forum held in London. Östen Frånberg to speak.

October 25-27: Fall Internet World held in New York.

www.exu.ericsson.se/EUS/marketing/events

UPDATES

Ericsson's major brand name campaign on the theme mobile Internet has launched and will continue for the remainder of the year in most media.

In *Contact* 13, we wrote about **Anna Olsson**, who had traveled to Sydney to bring home an Olympic medal in canoeing for Ericsson. Anna went to the final in both K1 500 meter and K2 500 meter, but she ended up with an eighth and last place finish in the finals.

NEW ASSIGNMENTS

Henrik Nordh

Henrik Nordh was named the new senior editor for *Contact* on October 6. Henrik Nordh previously worked at Stockholm Metro, where he was a reporter and news manager since the newspaper's inception in 1995.

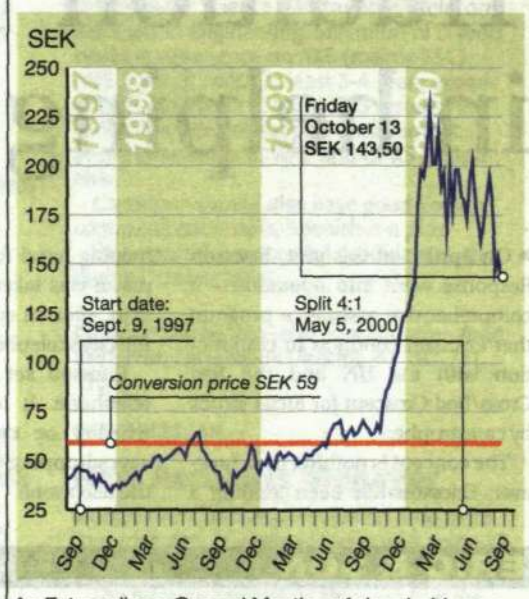
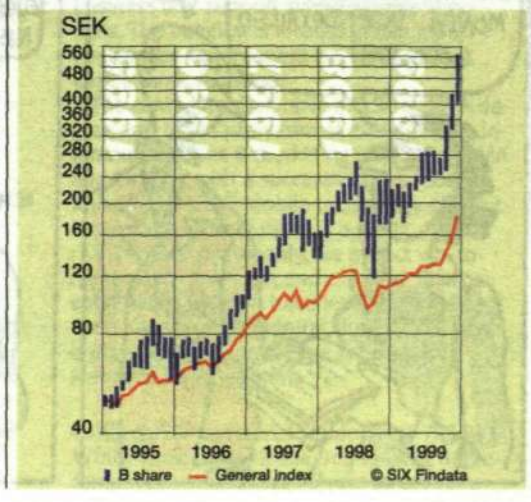
He succeeds **Patrik Lindén,** now a PR consultant for Cross Communications.

Peder Asplund has been named the new head of Ericsson in Peru, where he succeeds **Roman de los Martires** who is returning to Ericsson in Spain.

Lars Westerberg, Ericsson Radio Systems, has been named senior specialist within the area of IP-based Routing and Transport over Wireless Networks.

Ralf Keller, Ericsson, Aachen, has been named senior specialist within the area of Multiaccess System Integration.

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