



Voice services increasing

Voice activated services, such as information on train times, are becoming increasingly commonplace. The number of possible services is limited only by the imagination.

World Watch, 10



With the right to fail

At Ericsson's research and development center in Montreal, talented developers are allowed to test the limits of technology and have permission to fail in half of their projects.

Technology, 22-23

contact



57.50

Ericsson B share,
Stockholm 16/3
Last Contact 85.00

NO. 5 • MARCH 22 2001



South Korea is a rapidly growing market for the major telecom companies. However, in order to achieve a breakthrough in the market, collaboration with a local partner is essential to avoid being given a cold shoulder.

Photo: Lisa Selin

Collaboration a must

Fifty years ago, South Korea was a war ravaged country. Today it is one of the world's most powerful industrial nations. The country sports a patriotic business culture with a market dominated by large conglomerates. Thanks to quality products, hard work and partnerships with the

country's largest businesses, Ericsson has managed to become well-established in the market.

Operators in South Korea are now focusing on WCDMA and the President of Ericsson's local company predicts a bright future for Ericsson in the country.

Spotlight on Korea, 16-19

2,400 to get new employer

The investment company Apax Partners is acquiring Ericsson Enterprise's retail operation for USD 47 billion. Apax Partners will be taking over market units in 18 countries and 2,400 employees will have a new employer. The affected employees will be able to participate in an options program and will be offered skills development opportunities. The sale is part of Enterprise's strategy to get out of direct sales and capture a larger share of the market through retailers.

News, 4

Deferred investments result in loss

Not even Ericsson is immune to the economic instability that is spreading through the world's markets. Although Ericsson's management predicted no profits for the first quarter of 2001 at the presentation of its year-end report for 2000, the company was forced to issue an earnings warning for anticipated losses of between USD 400,000 and 500,000 for the quarter. The primary reason is thought to be lower sales of mobile phones and deferred network investments by operators in Western nations.

"We stated previously that the economic situation is becoming increasingly unstable," says Ericsson's CFO Sten Fornell.

News, 5

FEATURE

Ericsson's hot house for new ideas, Ericsson Business Innovation, has received more than 500 ideas since it started up last summer. Currently are 25 projects underway. **20-21**

TECHNOLOGY

The radio link solution MINI-LINK BAS not only connects radio base stations in mobile networks. It can also be utilized to provide radio access. Licenses for the technology, known as LMDS, are currently being issued, although the market has yet to take off. **25**

AT WORK

The role of secretaries has changed. Today, there are greater demands for independence and expertise. Elvira Landiribar works as a secretary for the head of Ericsson in Madrid. "It's a challenge to be prepared for anything," she says. **26-27**



A designer with attitude

Nikolaus Frank is Ericsson's new head of design. One of his goals during the coming year is to provide Ericsson's mobile phones with a more distinct attitude and identity. He does not consider his job to be a one-man show - in fact he welcomes discussions and new ideas from all parts of the company. **12-13**



Photo: Lisa Selin

See us at
CeBIT
HANOVER 22 - 28. 3. 2001
Hall 14, Nr.J44

How fast is your 3G equipment
getting to market?



COMPUTING
COMMUNICATIONS
VIDEO



Mobile Network Test Equipment Ready or not, it's coming. Wireless Internet, video, data, location-based services, full-time packet-based networks, and more. Where's your equipment? Successfully test, simulate, and monitor your UMTS and CDMA2000 network elements — and you could be the first to market with working solutions. The world waits. But not for long. To see our entire suite of 3G test tools, call your local Tektronix office or visit www.tektronix.com/3g

Austria +43 (2236) 8092 362
Belgium +32 (2) 715 89 70
Central Europe +43 (0) 2236 8092 301
CIS Countries +3589 4783 4211
Denmark +45 44 850 700

Finland +358 (9) 4783 400
France +33 (0) 1 69 86 80 34
Germany +49 (221) 9477 400
Greece +30 1 68 74 100
Italy +39 800 231 233

Middle East +971 (2) 279 115
Netherlands +31 (23) 569 5555
Norway +47 22 07 07 00
Poland +48 (0) 22 521 53 40
Russia & The Baltics +3589 4783 4211

Spain +34 (91) 372 6055
Sweden +46 (8) 477 6500
Switzerland +41 (41) 729 36 40
Turkey +971 (2) 279 115
UK +44 (0) 1344 392400

Tektronix

Big plans for small parts

Ericsson Microelectronics plans to use its strength in four key areas to join the ranks of the world's leading component suppliers. Bluetooth, radio circuits, power modules and opto components are all very successful areas of operation for the company.

Bo Andersson, President of the company, now aims to make Ericsson one of the three leading companies in the world in all of these areas.

► It is full speed ahead for Ericsson's business involving system and telephone components.

The Microelectronics business unit managed to increase sales by 70 percent last year.

"I'm very pleased. Progress has been better than I anticipated," says Bo Andersson after his first year as President.

The past year was marked by major changes for the Microelectronics business unit. Bo Andersson took over as President last May, succeeding Sigrun Hjelmqvist, and proceeded to outsource two large parts of the operation during the year – energy systems and component distribution. Despite these major changes, the unit has pushed boldly ahead.

"Operations needed to be refined; now we can focus on our core areas of research, development and manufacturing microelectronics components. We're going to concentrate on developing operations and securing long-term profitability," says Bo Andersson.

Last year, the volume of sales increased by 70 percent. The business unit's focus on selling more refined products rather than individual computer chips, has proven to be a sound decision.

Chips of varying complexity and modules, which are essentially circuit board assemblies that operate like tiny complete systems, have made Microelectronics highly competitive. Complete system products, with specially designed software, are most appropriate for use in the Bluetooth field – an area that is expected to see significant growth.

Bluetooth surge expected

Once a Bluetooth standard is established, Ericsson Microelectronics expects to manufacture tens of millions of radio modules for Bluetooth products.

According to the consulting firm Frost & Sullivan, 11 million Bluetooth products valued at USD 2.4 billion will be sold this year. In order to prepare in advance of the expected onslaught, Microelectronics has invested tens of millions



Bo Andersson, President of Ericsson Microelectronics, has a background in physics and twelve years' experience at Ericsson.

Photo: Lars Åström

of USD in the Kista plant in Stockholm, in order to increase production of the radio circuits.

"We've expanded our capacity in the plant four times, and have switched over to larger silicon wafers," says Bo Andersson.

Radio application components are Microelectronics' most important area.

"Our strategy is to remain a leader in the field and to continue to develop our selection of complete solutions for radio applications. We've created leading-edge expertise by not only delivering the hardware, namely the circuits, but also the software. Currently, we have 200 engineers working on this."

Another especially successful area is DC/DC Power Modules.

"We're definitely a world leader when it comes to DC/DC, and we can do even better still," says Bo Andersson. "With a strong product program and by working on a few key customers, there is significant potential for additional growth."

Opto components is another area that is

experiencing positive developments. With an increased focus on broadband communications, there has been a resurgence of interest in fiber-optic access. Ericsson has assumed a strong position in this area.

Unique expertise

"Our opto operations are moving into a very exciting phase, with development of products for the next generation of systems and networks. These will be based on optical components for fiber to the home (FTTH) and to the antenna. This is an area that Ericsson, along with its other optical operations, has unique expertise in,"

says Bo Andersson.

In order to continue to be a leader and remain profitable, Ericsson Microelectronics needs to increase volume and improve efficiency. The trend is towards utilizing partners for volume production. For the past couple of years, Microelectronics has been collaborating with several silicon plants in Taiwan, Singa-

pore and the US that manufacture exclusively on a contract basis for their clients.

Other collaborations are also taking place in the areas of technology and marketing. One example is the collaboration between Microelectronics and the US company Qualcomm in the area of Bluetooth applications for CDMA phones.

In Europe, Ericsson Microelectronics is one of the leading players, ranking as the fourth largest component supplier. But, there is still a long way to go before the company assumes a leading position.

On a global level, Ericsson's Microelectronics operations are just a tiny dot on the map. It is within certain areas of specialization that the company excels.

"Our overall sales are lower than the major component companies, but we are aiming high. It is our goal to be among the top three players worldwide, in all of the fields in which we conduct operations. Within three or four years' time we hope to have doubled the size of this operation."

Lena Widegren

lena.widegren@lme.ericsson.se

*Our goal is to be among
the three largest
in the world*

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

ASSISTANT EDITOR

Pia Rehnberg, +46 8-719 34 72
pia.rehnberg@lme.ericsson.se

EDITORIAL STAFF

Lars Cederquist, +46 8-719 32 05
lars.cederquist@lme.ericsson.se

Lars-Magnus Kihlström, +46 8-719 41 09
lars-magnus.kihlstrom@lme.ericsson.se

Jesper Mott, +46 8-719 70 32
jesper.mott@lme.ericsson.se

Jenz Nilsson, +46 8-719 00 36

jenz.nilsson@lme.ericsson.se

Ulrika Nybäck, +46 8-719 34 91
ulrika.nyback@lme.ericsson.se

Gunilla Tamm, +46 8-757 20 38
gunilla.tamm@lme.ericsson.se

Lena Widegren, +46 8-719 69 43
lena.widegren@lme.ericsson.se

PHOTO EDITOR

Rolf Adlercreutz, +46 8-719 71 89
rolf.adlercreutz@lme.ericsson.se

PHOTOGRAPHY

Ecke Küller, +46 8-681 35 07

ecke.kuller@lme.ericsson.se

Lars Åström, +46 8-719 93 31

lars.astrom@lme.ericsson.se

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

LAYOUT AND WEB DESIGN

Paues Media, +46 8-665 73 80

PRINTED AT

Nerikes Allehanda Tryck,

Örebro, 2001

CONTACT ON THE WEB:

http://www.ericsson.se/

SE/kon_con/contact

DID YOU KNOW THAT...

...Swedish exports have become increasingly dependent on Ericsson?

In 2000, Ericsson's share was almost one-sixth. Ericsson's share of total Swedish exports from 1996-2000:



3G deliveries to Austria

» Austrian operator ONE has appointed Ericsson as its supplier of UMTS equipment. Deliveries are to begin as soon as possible, to enable ONE to carry out the commercial launch of its network by the middle of next year. The contract represents a breakthrough for Ericsson in Austria, where the Company's mobile operations have had difficulty establishing a foothold.

Broadband to Normandy

» French operator Altitude Telecom has selected Ericsson as its supplier of wireless broadband.

Ericsson's MINI-LINK BASE gives the operator a point-to-multipoint radio link that can handle transmission speeds of 37 Mbits per second.

Ericsson is contracted to deliver a turnkey solution based on a Local Multipoint Distribution System (LMDS) to Altitude Telecom, which has obtained a license for wireless broadband in the Normandy region of northwestern France. Delivery is to commence immediately. (Read more about LMDS on page 23.)

Key CDMA test in China

» Weeks of intensive work and testing recently paid off, when the first CDMA call, using only Ericsson equipment, took place in Nanjing in China. The call was made possible by a joint effort of Ericsson technicians in San Diego, the US, Canada and China. The equipment, which consists of an MSC (Mobile Switching Center), a BSC (Base Station Controller) and an HLR (Home Location Register), arrived in China during the last few days of 2000.

Economic aid to El Salvador

» Since January 13, El Salvador has been hit by two major earthquakes and about 5,000 aftershocks. Ericsson's local companies in El Salvador recently decided to donate a further USD 40,000 for telecom equipment, medicine and the rebuilding of a school in the country.

"The earthquakes have been terribly stressful for the population. Many people are constantly nervous," says Magnus Gall, acting president of Ericsson in El Salvador.

3G launch in Japan postponed

» Japanese operator J-Phone, to which Ericsson supplies equipment, has decided to postpone the commercial launch of 3G, which was to take place in October. The primary reason is that the operator wants to use the newer version of the standard, according to the 3GPP consortium.

"This is the operator's own decision, and Ericsson supports them one hundred percent. We have a commitment to deliver 3G products to our customers quickly," says Torbjörn Possne, manager of the WCDMA/PDC Systems business unit.

According to the new schedule, J-Phone is now planning the commercial launch of 3G for June 2002, starting in Tokyo.

Apax buys sales companies

Ericsson Enterprise is selling its sales companies to Apax Partners. This is the last phase of Enterprise's strategy of exiting completely from direct sales.

Apax Partners will take over sales and customer service in 18 countries. As a result, 2,400 people will have a new employer.

The Apax Partners company is a leading global investment company that invests in both startups and established enterprises.

"The deal, worth over USD 480 million, is one of the largest divestments Ericsson has ever made," says Lars E. Svensson, President of Ericsson Enterprise.

Apax will focus on sales to larger companies, but as Lars E. Svensson explains, the transaction will ultimately also increase sales of Ericsson's business solutions to smaller companies.

Large portfolio

Enterprise's own sales companies have been far too focused on large accounts. And as long as Enterprise has had its own sales companies in the market, no dealers have dared to enter the arena. With Apax Partners as a retailer, more partners will dare to build up their sales to smaller companies.

"Enterprise's market shares have been too small. We will eventually take on other new partners to manage our sales, and we will capture larger market shares. Our portfolio contains products and solutions for both large and small



The agreement was signed by Lars E. Svensson, President of Ericsson Enterprise, and David FitzGerald, president of Apax Partners. David FitzGerald promises that the 2,400 employees who will acquire a new employer will be included in a stock option program.

companies," says Lars E. Svensson.

The deal with Apax Partners is the final stage of the multi-channel strategy, which has been a long process. Enterprise's divestments include its US sales company last year.

Retains 20-percent stake

Apax Partners will work on system integration and combining Ericsson business solutions with products from other manufacturers. Ericsson selected the company

from some ten prospective purchasers, and has negotiated intensively with Apax since year-end 2000. Ericsson will retain a 20-percent shareholding in the newly formed company and Lars E. Svensson will sit on its board of directors.

"By retaining an interest in the company, we show that we are acting in good faith – that is, that it is not a matter of dumping something we do not believe in. The customers will also feel more secure knowing that Ericsson is staying on

as a co-owner. It also enables Apax Partners to use the Ericsson name, which is worth a great deal to them."

David FitzGerald, President of Apax Partners, says that the new company's goal is to be a world leader in system integration and business-solution deliveries. It is taking over operations in Asia, Europe and South America.

He wants to make it clear that the 2,400 employees who will be affected need not worry. They will be given ample opportunities to upgrade their skills. Everyone in the new company will also be included in a stock option program.

No change for customers

"Employees should not expect any major changes in the short term. If we achieve our goals, everyone in the company will enjoy the effects of our success. Customers will not notice any changes at all," says David FitzGerald.

Ove Wedsjö is in charge of sales and marketing at Ericsson Enterprise. He will manage Ericsson Enterprise in close cooperation with the new company, and his organization will have about 600 employees.

"The group consists of sales representatives, support personnel and experts in market introductions. We will provide support to the sales force," says Ove Wedsjö.

Via a partnership program, the group will help all sales companies become licensed dealers.

Jesper Mott

jesper.mott@lme.ericsson.se

Increased customer base

The agreement with Apax Partners marks the conclusion of a long process. One and a half years ago, Ericsson Enterprise decided to adopt the so-called multi-channel strategy. The purpose was to phase out direct sales and, instead, to reach customers by cooperating with partners.

The goal is to achieve a broader customer base and increase sales.

"When we evaluated the operations 18 months ago, we concluded that Enterprise's growth was too slow, in relation to the rest of the Company. With our direct sales, carried out by Ericsson's local companies, we were missing out on the small and medium-size companies," says Ove Wedsjö, sales and marketing manager at Ericsson Enterprise.

"We need partners who are highly skilled in sales to various market segments. This means we cannot

compete with them directly, so we've abandoned direct sales completely."

Major advantages

Considerable progress has been made in the past 18 months. To date, Enterprise has agreements with 400 partners worldwide who may, in turn, cooperate with 1,400 dealers.

It is too early to make any extensive evaluation of the new strategy, but there are signs of positive effects – for example, in the US

Norstan is the company that took over the US sales company in August last year. Ove Wedsjö says that Enterprise has benefited considerably from having access to Norstan's customers as well.

"Last year, the US operations were profitable for the first time."

The US is an attractive market for expansion. Enterprise has 10 percent of its sales in the US. Slightly more than 70 percent of sales are in

FACTS/THE ROUTE TO THE AGREEMENT

- **Spring 1999:** Enterprise's sales company leaves local Ericsson company in Austria.
- **October 1999:** Multi-channel strategy established.
- **2000:** Sales companies in 18 countries ready for divestment. These are the same 18 that were later acquired by Apax Partners.
- **August 2000:** Norstan buys Enterprise's US sales company.
- **September 2000:** Launch of partnership program for retailers and E-business platform.
- **March 2001:** Agreement with Apax Partners marks Enterprise's definite exit from direct sales.

Europe. Ericsson Enterprise is expecting sharp growth thanks to the new sales channels.

Growth to increase

Market share is currently 11 percent for larger systems, while sales are growing 5 percent per year.

The growth target is an annual 30-percent increase, to a market share of not less than 20 percent in 2004.

"We have about 50,000 customers worldwide. We're now focusing on upgrading these customers up to 3G. We have solutions that connect companies to mobile Internet, based on a combination of our own hardware and services and services provided by operators and service suppliers," says Ove Wedsjö.

Jesper Mott

Downturn hampers profits

Ericsson's first-quarter earnings will be lower than previously forecast. In an earnings warning issued on March 12, company management announced that a loss of between USD 400 and 500 million is anticipated for the quarter.

Deferred investments on the part of operators in the US and Western Europe, combined with difficult times for mobile phones, were cited as the primary causes.

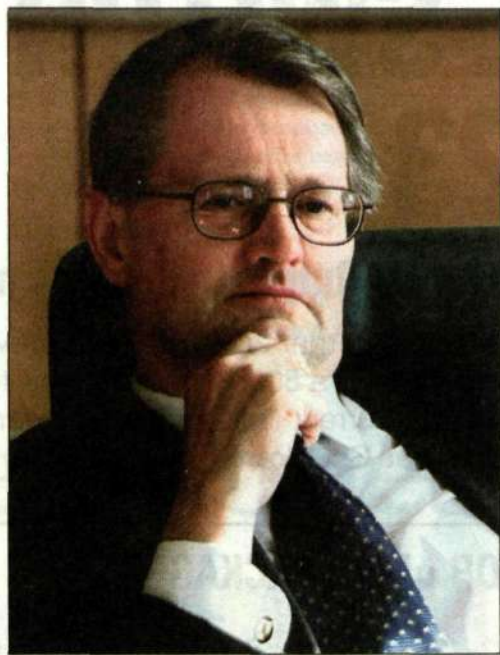
In conjunction with the year-end financial report for 2000, Ericsson reported that sales were expected to increase by 15 percent during the first quarter. During the first three months, no profits were anticipated, however, due to losses within Consumer Products and major investments in 3G. Signs indicating a decline in investments on the mobile side led to a downward revision of the first-quarter forecast.

"We've previously discussed the fact that the economic situation is becoming increasingly unstable. That instability has accelerated recently, primarily in the US, although the trend is spreading to other parts of the world," says Sten Fornell, Ericsson's CFO. "Growth continues within mobile systems, but at a weaker pace, while mobile phones are performing below expectations."

"Reasons for this include low market demand for replacement phones, high inventory levels and reduced operator subsidies. The surplus of phones on the market has also pushed down prices. Ericsson expects that sales of mobile phones will be considerably less during the first quarter of this year than last."

Deferred investments

It is within the area of 2G systems that the slowdown in sales is currently being felt. Already at the time of the year-end financial report, Ericsson made it clear that it was not anticipating any significant volumes



A hiring freeze will be implemented by the whole company, according to Kurt Hellström, CEO of Ericsson.

Photo: Lars Åström

for 3G this year – expecting deliveries to take off in 2002.

There are several reasons why operators are reducing their investments. General economic instability is playing a major role, causing companies to defer investments until a

later date. Instead, they are focusing on capitalizing on investments that have already been made.

In Western Europe, several operators are now strengthening their balance sheets prior to future investment in 3G systems. In the US and

Latin America, operators that have made the decision to invest in GSM prior to the transition to 3G, have yet to start the build-out phase.

General trend

The market slowdown is a phenomenon that is currently affecting the entire IT industry and is not a situation unique to Ericsson. The effect of the slowdown has been for sales during the quarter to remain unchanged or slightly lower than last year. Nevertheless, future-oriented investments continue to be made in development, production and implementation of 3G, which will result in a pre-tax loss in the range of USD 400 to 500 million.

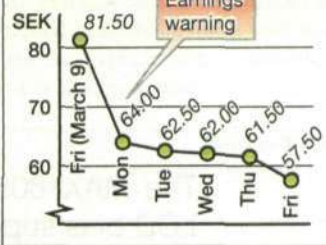
The situation within the mobile phone market will not affect management's long-term goals for Ericsson to continue to be a strong player within Consumer Products.

The ongoing restructuring program for the division continues. A hiring freeze has been implemented in the Mobile Systems division a few weeks ago.

Kurt Hellström, CEO of Ericsson, says that this policy will be adapted

B SHARE HEAVILY HIT

Ericsson's B share dropped sharply on the Stockholm Exchange after the announcement of the earnings warning.



by the whole company. He also points out the importance of everybody doing their part.

"While we cannot control external factors like a worsening global economy, we can control our costs and internal operations. We are currently reviewing our internal operations in order to identify possible cost cuts and to eliminate unnecessary expenses. Each of us has to contribute to this by managing our costs even more carefully," Kurt Hellström says.

Lars-Göran Hedin

lars-goran.hedin@ime.ericsson.se

Dramatic week for telecom business

Ericsson's profit warning created headlines all over the world. The day after this news broke, the Financial Times concluded that the whole technology sector had received a shock.

However, the storm around Ericsson abated as competitors were forced to come out with statements that confirmed the setback in economic activity.

Ericsson's warning marked the beginning of a dramatic week for the telecom business. This news was followed by the information that Motorola is planning to reduce the number of staff in mobile phone

production by 7,000 people. Shortly afterwards, Siemens announced a profit warning, and then Nokia announced that the total global market for mobile phones this year would fall short of the company's earlier estimates. In spite of this, Nokia's management is sticking to previous forecasts of the results.

In the Financial Times as well as the Wall Street Journal, Ericsson's profit warning was attributed to the general slowdown in the telecom sector. The decrease on the systems side, however, was said to have come as a surprise.

"Ericsson on Monday indicated for the first time that systems, by far

its largest division and the engine of its growth, was being hit by the slowdown," the Financial Times wrote. An analyst stated that "The slowdown on the system side came as a surprise."

Angela Dean, analyst from Morgan Stanley Dean Witter, says that she had been prepared for the warning, but that it is disquieting that the slowdown seems to permeate all of Ericsson's business areas.

The American companies Lucent and Motorola had earlier issued profit warnings, but Ericsson was the first company in Europe to issue such a dramatic warning. Analysts have become sure that the downturn in the US will also affect Europe.

The following day, the Wall Street Journal concluded in their European edition that "...Ericsson's grim outlook is partly rooted in circumstances outside its control, especially the effect of a slowing global economy on technology companies."

The Wall Street Journal also writes that the flow of negative news is putting immense pressure on Ericsson's management. However, it is also pointed out that Ericsson Chairman Lars Ramqvist said that he is convinced that the company will be able to turn this development around.

Jesper Mott

jesper.mott@ime.ericsson.se

Two-part report on its way to readers

It's finally ready – Ericsson's annual report for 2000. This year, it consists of two sections, one financial and one more general in nature.

Some 700,000 copies have been printed – almost half a million of those being printed and distributed in the US.

The new annual report means that Ericsson is abandoning its previous tradition of providing a complete review of all important activities, highlighting company operations using the internal organization as a starting point.

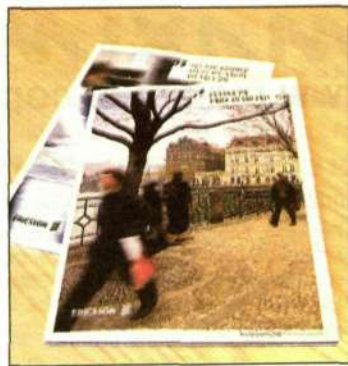
Instead, a decision was made to highlight Ericsson's strong points, how the company is working to be-

come a leader in its field, and how it is generating value for its shareholders.

This is accomplished through eight thematic accounts, accompanied by illustrations designed to explain important activities or how system solutions work.

The changes to the format are the result of a study conducted last summer in which leading investors and analysts were asked what they thought about Ericsson's reporting, as well as a comparative study of Ericsson's main competitors.

The findings were clear – greater clarity and better English were required. As a result, the annual report has for the first time been written in English as the original language.



This year, three alternatives will be available on the Web – an HTML format presentation, an interactive flash version, and Acrobat pdf files.

Lars-Göran Hedin

T29 launch in Asia

Ericsson's new mobile phone, the T29, is being launched first in the Asian market.

The phone will be available in stores within a few weeks.

"It's a small, well-designed telephone that is packed with the functions that people need," says Mikael Westmark, head of strategic public relations at Ericsson Mobile Communications.

The T29 is a tiny, compact dual-band phone weighing just 95 grams. Standby time is 150 hours with talk time of up to seven hours. Users of the T29 can send both SMS and group SMS messages. The phone also includes four games, voice recognition, vibrate alert and an extensive phonebook.

The T29 works well with Ericsson accessories such as the Bluetooth



headset, FM radio, MP3-player and Chatboard. The T29

contains WAP so that users can access the growing number of mobile Internet service offerings.

Hong Kong, Taiwan, Indonesia, Malaysia, Vietnam, Singapore and the Philippines will be the first countries to receive the T29. The phone will be launched during the second quarter of the year in Europe.

"Ericsson has placed a high priority on the rapidly expanding Asian market, and we believe that the T29 will be a very interesting product for our customers in Asia."

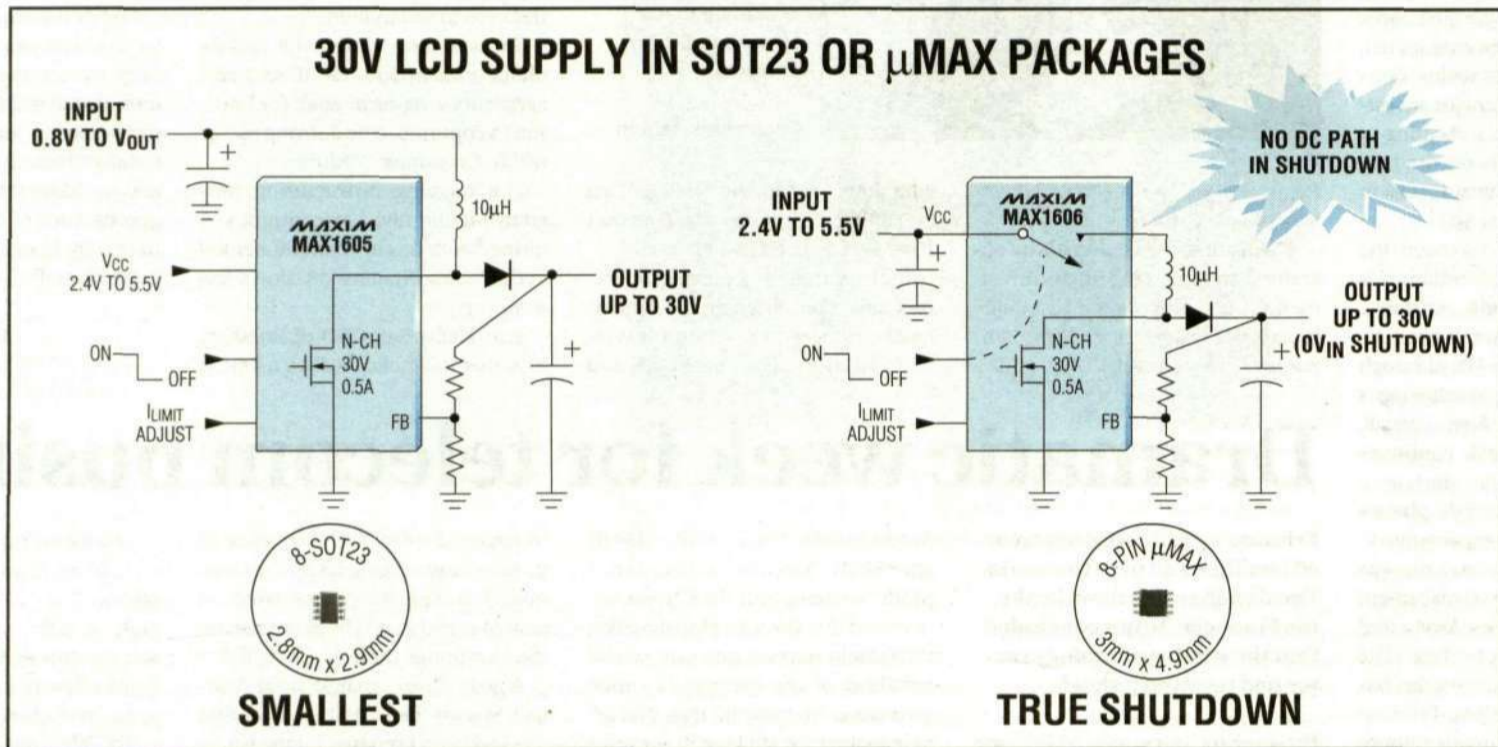
The T29 supports several major Asian languages, including Vietnamese and Thai.

Jesper Mott

SMALLEST 30V LCD SUPPLY HAS INTERNAL SWITCH IN SOT23

Disconnects DC Path from Battery for 0V Output in Shutdown

The MAX1605 and MAX1606 step-up DC-DC converters use an internal 30V switch to provide a compact LCD bias supply. The MAX1605 is the smallest device of its kind, fitting a 500mA MOSFET switch into an 8-pin SOT23 package. It operates at up to 500kHz and has adjustable current limit, reducing external component size. The MAX1606 fits in an 8-pin μ MAX package and features True Shutdown™.



Save space and reduce battery drain with the MAX1605 and MAX1606. The MAX1605 is the smallest solution, fitting a 30V switch into an 8-pin SOT23. The slightly larger MAX1606 also includes the True Shutdown feature, cutting the DC path from battery to load while in shutdown.

- ◆ 30V, 0.5A Internal N-Channel MOSFET
- ◆ 8-pin SOT23 Package (MAX1605)
- ◆ 500kHz Switching Frequency Reduces Component Sizes
- ◆ Adjustable Current Limit Reduces Inductor Size
- ◆ Up to 88% Efficiency
- ◆ No Battery Drain in Shutdown (MAX1606)
- ◆ EV Kits Available to Speed Design

True Shutdown is a trademark of Maxim Integrated Products.



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 Hatteland; 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.

Gävle plant picks up pace

Radio network products for UMTS went into volume production on the last day of February at the Gävle plant. The pace of production will increase steadily now and by 2002 a large number of networks should be in operation in Europe and Asia.

The new Node Production Center (NPC) for UMTS was inaugurated in

Gävle in mid-September last year. In addition to base stations for UMTS, Radio Network Controllers (RNC) – a new product for the Gävle plant – are also produced here. RNC is a control unit for base stations.

Like a snowball

"Deliveries started last December, and now in March we will be picking up the pace of production to

increasingly high levels," says Lars Johansson, who is head of Supply and Services in the Wideband Radio Networks product unit.

"Several of our customers will be having equipment delivered to their sites within the coming weeks. There is a great deal of pressure from those operators who have received a UMTS license."

Lars Johansson compares volume production with a snowball that

begins as a little ball and starts to grow as it rolls.

Increasing volume

The big challenge now is to get production to increase in volume every day. At the main plant in Gävle, there is a new production line for circuit boards for UMTS base stations, and the pressure there is heavy as well.

Consequently, the circuit board

production that will start up this summer at the Kumla plant is very important.

"NPC in Gävle has the capacity to handle the volumes required until the first quarter of 2002. For the continued capacity increase, we'll need another NPC, which is something we're looking at now."

Gunilla Tamm

gunilla.tamm@ime.ericsson.se

Mobile phones within the limits

Mobile phone buyers should not focus exclusively on radio wave exposure values.

Even more important is ensuring that their phones work well, according to Gert Anger, a physicist at Sweden's Radiation Protection Institute (RPI), which conducted a test in which all mobile phones tested, fulfilled EU requirements.

RPI's study compared a number of different phone models, measuring their SAR (Specific Absorption Rate) values. Those values are a measurement of how much energy is absorbed by the body. Measurements showed that all phones registered well under the EU limit of 2 W/kg.

Ericsson's T28 had the highest recorded value, 1.7 W/kg, compared



Ericsson's T28 passed the SSI-test of radio wave exposure value.

with the lowest value of 0.17 W/kg, found on a Panasonic model.

"That does not mean that the T28 is more dangerous than other mod-

els. The threshold for detectable health effects is 100 W/kg, which means the EU limit is 50 times lower," says Gert Anger.

RPI's measurements go beyond simply measuring SAR values.

"We believe there is a correlation between high SAR values and how well a phone operates in terms of reception. That's what we're going to research next."

The figures published by SSI are based on the worst possible reception conditions and constitute maximum levels. This means that the phones ordinarily transmit at much lower levels, in some cases less than 0.001 W, according to SSI.

A telephone with poor reception can, on the other hand, operate at unnecessarily high levels. Results from the study are expected to be presented later this spring.

Mikael Westmark is Ericsson's spokesman for healthcare issues. He thinks it is somewhat unfortunate that SSI utilized a measurement technique that is not univer-

sally accepted. In the near future, SAR values will be measured and recorded according to a new standard that will be shared by everyone.

"It would have been better if they had waited for the new standard," he says.

Once the new standard is in place later this spring, all new Ericsson phones will be labeled with information pertaining to SAR values.

Many factors influence how much energy the head absorbs from a phone's radio wave. These include how you hold the phone and how close the antenna is. Another factor that can affect levels emitted by phones, is how far away from a base station you are.

Lars-Magnus Kihlström

lars-magnus.kihlstrom@ime.ericsson.se

Major AXE campaign after mobile successes

Ericsson is currently gathering its forces for a major AXE campaign.

This is the result of successes in landing 3G and Engine system contracts, in which AXE plays a major role.

Starting this summer, primary responsibility for software development will be concentrated at a new unit within Ericsson Eurolab in Germany.

AXE is on the verge of a technological rebound. The system is at the core of both third generation mobile telephony and the equivalent in fixed networks, Engine. With the latest successes in landing 3G contracts, the need to coordinate development has become more apparent.

Biggest campaign ever

"We're undertaking the biggest AXE campaign ever. That's why we want to implement joint development of third generation mobile telephony and Engine," says Kristian Toivo, head of the new organization, headquartered in Aachen, Germany.

The new organization, known as Core Unit Switching Products (CUSP), includes approximately 20 design centers and some 3,000 employees worldwide.

The unit is part of the Mobile Systems Division and began operations on January 1 of this year. Effective July 1, it will also assume responsibility for development work on the fixed network side, although the Multi Service Networks Division (DMN) will not be relinquishing control of its best seller.

Increasingly similar

"Operations will be managed jointly by the Mobile Systems Division and DMN," says Torsten Kongshøj, who will be responsible for coordination with respect to AXE in multi service networks.

In the past, AXE development for mobile and fixed networks has in certain respects been conducted separately. With the development of third generation systems and the Engine concept, they are becoming increasingly similar.

"These days, with Engine, the architecture for fixed networks and

mobile systems is very similar," says Kristian Toivo.

"Among other things, we're going to create a common software platform for AXE."

"Regardless of whether the system will be utilized for 3G systems such as UMTS, CDMA, PDC, or fixed systems such as Engine, the same basic framework will be used."

No lay-offs imminent

The biggest challenge right now is to get UMTS out onto the market, while simultaneously continuing to develop Engine.

Some 100 people will be affected at DMN in Stockholm. Some of those employees will be reassigned to new tasks.

"There's no reason to think that people will lose their jobs. There will be opportunities for qualified workers in Aachen, and activities will continue in Stockholm for some time to come," says Torsten Kongshøj, who will himself be moving to Germany this summer.

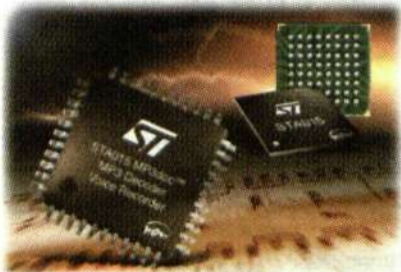
Lars-Magnus Kihlström



AXE forms the core of 3G and Engine. The biggest development effort ever is currently underway.

Photo: Petter Särkinen

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.



ENTERTAINMENT

CAMERA

CONVENIENCE

SECURITY



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.

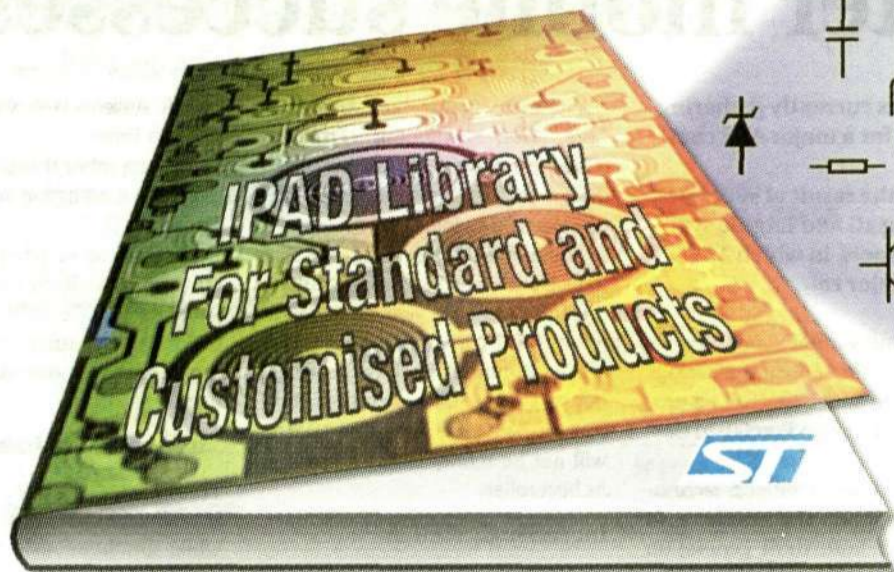
IPAD™ Integrated Passive and Active Devices We Wrote the Book

- ▣ Higher filter performance than with passives
- ▣ 40 plus component integration
- ▣ Smaller PCB footprint
- ▣ Compatible with industry standard assembly

These are just some of the advantages of the new IPAD family from STMicroelectronics. Advantages that give them a real edge in high reliability, nomadic applications.

Combining several types of passive and active components on a single chip, IPADs are available in a number of optimised packages, including FLIP-CHIP, to minimise their inherently low interconnect inductances.

Our full library of integratable components has been designed to match your specific application requirements. To get more from the people who wrote the book on IPADs go to www.st.com/discretet.



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

STMicroelectronics
More Intelligent Solutions



Seeing is believing in a Creative World

Ericsson's most popular visitor center, Creative World, based in Stockholm, is set to get a facelift and expand to other countries worldwide.

The center, run by Division Multi-Service Networks (DMN), has just celebrated its first birthday.

During its short life it has attracted 10,000 visitors from more than 100 countries.

Creative World is an innovative product demonstration center that shows DMN products, the Engine solution and a vision of the future. Its manager, Ronnie Bergqvist stresses that it should act as an inspirational experience where "seeing is believing."

Visitors are shown a possible home of the future with a kitchen, living room, bedroom and study. They can see things happening and can pick up and examine products. Bergqvist says this is important:

"Ninety per cent of our customers are not technicians and they want to see things they can talk about. The purpose is to provide a good presentation so that visitors leave satisfied with a smile. They want to see a future home, but we say this is the home of today."

Re-designed

The center has been so successful in its first year that the Stockholm Creative World will be re-designed later this year to show more products which reflect the expansion of Engine across Ericsson divisions.

Eliot Freed from DMN's Marketing Communications, Events Marketing says the aim is to make Creative World more of the Ericsson story and more representative of the full Engine offering. DMN



The purpose with Creative World is to provide a good presentation so that visitors leave satisfied with a smile, says manager Ronnie Bergqvist.

products will still form the backbone of the center but there will also be an exhibition room with products from Division Mobile Systems, Division Data Backbone and Optical Services and Division Global Services.

Culturally tailored

In the meantime Creative World will be introduced to other countries starting with the USA and then Brazil and Croatia. But the future Creative Worlds will not just be copies of the original. Eliot Freed explains:

"They'll be culturally tailored, customized for each specific region, rather than just exporting

the Swedish solution. This is important because the success of applications can depend on different cultural traditions."

An application that is fascinating to Europeans may be of limited use in some Asian countries and research is currently being undertaken to decide which applications are suitable for different parts of the world.

Dallas in the planning stage

The first new Creative World will be integrated into the business lab in Dallas, USA. This is currently in the planning stage. The long term strategy is to have Creative World centers worldwide with the possi-

bility of running live demonstrations between them.

Although it is difficult to prove a connection between visits to Creative World and sales of Ericsson products, there is a strong suggestion that the figures are linked.

Manager Ronnie Bergqvist says, "We made a chart of the countries our visitors came from and compared it to Ericsson's data on sales areas broken down by country. The two charts are almost identical."

This was enough of a relation to expand the Creative World concept around the world.

Rosy Kempston
freelance journalist

Rapid construction of new development center

Ericsson's new research and development center in Brazil, built successfully in a very short period of time, was recently inaugurated. It is among the company's five largest centers and focuses on software development.

On March 8, Ericsson in Brazil inaugurated a new center for research and development. It is located in the city of Indaiatuba, near Campinas, where many of the country's software companies have set up operations.

The center will focus on developing software for the TDMA, CDMA, GSM and UMTS mobile systems, as well as developing AXE switches. It has already established collaboration with several universities in the region. Ericsson began developing soft-

ware in Brazil back in the early 1980s. Until last year, the company's research and development operations in Brazil were located in São Paulo.

Extensive recruitment

Prior to the opening of the new facility, approximately 140 people were employed as designers. Establishing the new center involved major recruitment efforts. Some 400 employees were selected out of 2,400 applicants. Only about 20 of the employees are foreigners hired on long-term contracts, although management hopes to recruit more.

The company expects to have 700 employees working at the center by the end of the year.

"Expanding the workforce is an exciting task. We are hiring both



recently graduated local talent and experts from around the world who have extensive experience from working at Ericsson," says Bernt Bergström, software development supervisor.

Tax relief

Ericsson invests approximately 15 percent of its profits in research

and development. Gerhard Weise, president of Ericsson in Brazil, explains why the company has made such a major investment in Brazil.

"Ericsson believes strongly in Brazil as a country, and our local company is doing very well. The Brazilian government provides tax relief for companies who invest in research and development within the country, a situation that will apply at least through the year 2009," he says.

More precisely, the tax law allows companies who invest at least 5 percent of their sales in research and development to avoid paying 20 percent VAT on the goods they sell in Brazil.

Jesper Mott
jesper.mott@lme.ericsson.se

HELLO THERE...



Photo: Ecke Küller

Stig Persson

...who left his position as head of Telia Carrier & Networks to oversee the new Access Business Development unit at the Multi Service Networks division from March 1 this year.

Why did you leave Telia to work at Ericsson?

"I worked at Telia for 24 years and was yearning for new challenges. Ericsson's vision of becoming the world leader in broadband access by 2003 appealed to me, as did the forward-thinking attitudes held by the employees at Multi Service Networks."

What do you see as the biggest adjustment for you personally?

"I'm used to working closely with customers and the market. My job at Ericsson will be more of an administrative function. From that standpoint, there will be a big change in my day to day work. On balance, however, project management at Ericsson appears to be better than at Telia, so it will be enjoyable to take on new job responsibilities."

What is the goal behind Access Business Development?

"To strengthen and protect Ericsson's market position for broadband access. Our task is to be in tune with the market and develop new business strategies, fostering a good business climate for Ericsson's products and solutions."

How can you contribute to that?

"I've just come from an operator, Telia, and know how they think in various business situations. Quite often, operators and suppliers have different ways of looking at things. As a result, I think my insights can be of great use."

What kind of projects is Access Business Development working on right now?

"We're working on business strategies within several areas including new access technologies and support systems to make it easier for various service providers to increase their revenues."

"Over the short-term, work will primarily be focused on developing new opportunities to earn money more quickly both for our customers and for Ericsson."

Jenz Nilsson
jenz.nilsson@lme.ericsson.se

Consumers willing to pay for 3G

» Consumers are prepared to pay up to USD 25 per month for mobile Internet service according to a study conducted by the London based consulting firm Coleago Consulting, as reported by the Totaltele Internet service.

The study, commissioned by Orange – which holds a 3G license in Sweden – also showed that 55 percent of Swedes could envisage using 3G services within five years. Some 39 percent of Swedes are willing to pay USD 20 per month, while 16 percent would pay up to USD 25 including sales tax.

License auction sets record pace

» Belgium's 3G auction ended at the beginning of March after only the first round, bringing in a mere USD 40 million to the Belgian government. The three licenses went to Mobistar, owned by France Telecom, KPN Orange and Proximus, jointly owned by the Belgian operator Belgacom and the UK's Vodafone. Recent auction proceedings in several countries have been lackluster compared with the record-breaking prices set for licenses in the UK and Germany last autumn.

Iridium haunts Motorola

» Investors in the Iridium project could file a lawsuit against Motorola for the failed project involving satellite-based infrastructure for mobile telephony. Should a lawsuit be filed, it would seek billions of dollars in damages, according to the New York Times, citing lawyers involved in the case.

Motorola oversaw the costly, high profile Iridium project during the latter part of the 1990s. Iridium declared itself bankrupt in 1999 after the project failed in finding a market for its product.

Fixed rates for foreign roaming

» The increasing number of virtual operators has led major European mobile phone operators to offer fixed calling rates for mobile phone calls between countries, or international roaming.

Orange charges the same per minute rate for calls between 19 different countries where its parent company, France Telecom, has operations. The rate has been set at approximately USD 0.8 per minute.

Vodafone, which includes the Swedish European company is introducing a European roaming service called Eurocall this March.

British Telecom offers business customers a fixed rate between 14 European countries for about USD 0.6 per minute. BT does, however, require users to make at least USD 70 worth of calls per month and use a special mobile phone.

Telia chooses Nokia and Siemens

» Swedish telephone operator Telia has chosen Nokia and Siemens as the suppliers for its 3G equipment, even though Telia does not hold its own 3G license. The company has, however, entered into collaboration with Tele2, one of four operators to receive a license in the beauty contest held in December 2000.

Voice services – a story as yet untold

Banking services and train schedule information. Those are two examples of voice-activated services that are increasing in popularity.

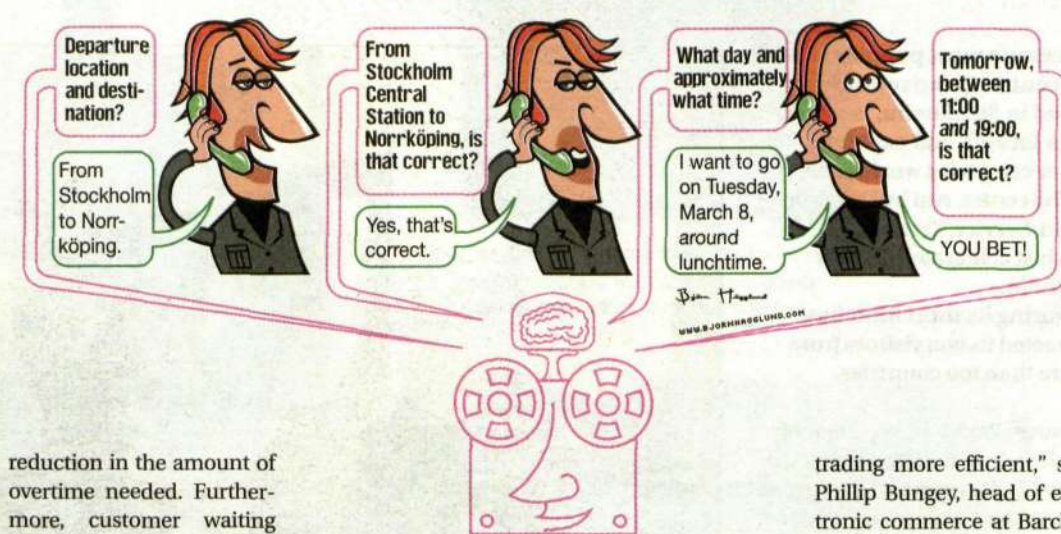
Numerous examples point towards major growth in the field of voice portals – voice-activated information services aimed at consumers.

The field can be divided into several categories. One includes voice-activated products for switches and existing telecom platforms, where operators are the main customers. Another category includes applications that are independent of platforms and network architecture, such as voice portals or operations with a significant need for telephone services aimed at consumers. Yet another group includes voice-activated telephones and mobile terminals. Ericsson conducts most of its voice-activated telephone research at Eurolab in Nuremberg, Germany.

Less monotonous

The primary motivation for acquiring voice-activated products is not always to streamline operations. Just as often it can be about creating a less monotonous work environment for employees. Swedish State Railways (SJ) began operating a voice-activated service back in November 1998, to provide train schedule information.

According to Patrick Berg of SJ's travel division IT team, it was created for the purpose of simplifying and complementing manual labor. "That, as well as being able to offer access to SJ's timetable, were the main reasons why we chose the automated timetable service. The decision was not based on any direct demands on us to make cutbacks. One benefit, however, has been a



reduction in the amount of overtime needed. Furthermore, customer waiting times have become shorter," says Patrick Berg.

To activate the service, customers simply dial up SJ's reservations number and then push zero. The voice dialog consists primarily of a question-answer function and confirmations. It is also possible to "page through" timetables by saying "later" or "earlier." To make a reservation, customers still need to transfer to a customer service representative. Now, however, when representatives pick up a transferred call, they can view the information that the customer requested, helping them be more prepared.

Always open

Another organization that uses speech recognition technology is the Swedish Automobile Registry. The registry's voice-activated system was set up in 1999, and received 825,000 calls last year.

The registry's voice-activated system utilizes a less complex approach than SJ's and does not con-

Voice-activation offers several advantages to users who don't have free hands

Catriona Chaplin

tain any dialogs. The primary advantage for customers is the ability to access the registry 24 hours a day.

Both SJ's voice-activated timetable and the Swedish Automobile Registry voice response system were developed in conjunction with Telia. One utilizes software from Philips, while the other uses software from the American company Nuance.

Voice-activated services are also being tried out in the financial world. Barclays Bank of London has developed a service in collaboration with British Telecom.

"The number of calls to our call center kept increasing and we wanted to find a way to make stock

trading more efficient," says Phillip Bungey, head of electronic commerce at Barclays Bank. "Today, approximately half of our business customers take advantage of this service."

Free hands

How are end users responding to voice-activated services? Most are in agreement that it is more natural to talk than it is to use a numeric keypad, a fact that bodes well for the future of speech recognition technology. Few, however, believe that voice-activation will replace ordinary keypad input technology, at least not initially. Catriona Chaplin of Ericsson Mobile Communication in Lund says that will involve crossing a threshold.

"Eventually, consumers will discover that there are advantages to the technology. We recently conducted a study where users who did not have their hands free were quick to realize the advantages of voice activation, such as when driving," she says.

Ulla-Karin Höynä
freelance journalist

Alert multilingual receptionist

Imagine a receptionist that can understand eight languages and is available 24 hours a day. A voice-activated product developed by Ericsson aims to do just that.

The product is called Voice Activated Assistance (VAA) and automates functions in products such as business switches.

The concept behind the product is to have a switch that enables internal callers to manage their own calls using voice activation.

By dialing the VAA extension, users can receive a phone number simply by saying a person's name.

In cases involving common names, such as John Smith, the user needs to know in which area the individual works in order to receive the phone number to the correct John Smith.

If the phone line for the person being sought is busy, the call is forwarded to either a receptionist or to voicemail. VAA can, together with the personal number service found in Ericsson's MD 110 business switch, forward a call to a mobile phone if the person in question has opted to do so.

Lighter workloads

Glen Whittier, product manager for the CTI product unit, does not believe that VAA will replace switchboard operators. Rather, the service will reduce the workload on receptionists, who will instead be able to devote more time to other receptionist duties.

"Between 30 and 40 percent of calls to a switchboard are internal calls," says Glen Whittier.

"This arises out of the fact that people don't always have access to

the internal phone list. Consequently, receptionists are burdened with numerous calls, while outside customers have to wait before receiving assistance," he says.

"There are no limits when it comes to the number of people using the service. It is designed to be able to search for a large number of individuals."

VAA has been tested by Ericsson in Stockholm. Now an Ericsson company in Europe and a European business customer are going to test the product.

Quick response

"I anticipate that the number of internal operator calls will shrink once there is a natural alternative. However, I do believe that many people will have opinions about its usefulness, such as how rapidly the correct person can be reached as

well as the importance of avoiding long pre-recorded messages. Greetings cannot be a minute long. Immediately after the 'Welcome to...,' the person calling should be able to say the name of the individual they are calling, without it feeling too abrupt," says Glen Whittier.

Telephone assistant

The next phase of development for VAA is to transform it into a personal assistant – a voice-activated secretary.

"You should be able to receive all kinds of information via VAA, change your profile information and be accessible outside the office with the same phone number."

"We're also planning on connecting VAA to Ericsson's Call Center," says Glen Whittier.

Ulla-Karin Höynä

J-Phone aims for the top

With Koichi Sakata at the helm, J-Phone is leaping ahead to a full-fledged mobile 3G network, with the intention of becoming number one in Japan.

"We're going to move directly to WCDMA. There will be no transition services. We need to change everything," he says.

The Japanese mobile phone operator is on its way to becoming the first in the world to operate a third-generation mobile network, which will be capable of supporting the growing number of broadband Internet services.

Telecom veteran Koichi Sakata allowed his company, J-Phone Communications, to choose WCDMA as the radio technology for its new 3G network that is currently under construction.

The selection of a WCDMA system is part of J-Phone's plan to expand beyond its current number two position to become Japan's largest operator.

SMS before Europe

J-Phone launched a short message service (SMS) called Sky Walker in November 1997, and introduced e-mail service about the same time – two years before such services hit Europe.

Special ring-tone services followed in November 1998, and Internet access arrived in December 1999 under the name J-SkyWeb.

J-SkyWeb offers users 3,000-character messaging. It also transmits images, and features color contents and color terminals.

"Last year the number of Sky Walker subscribers passed 6.5 million," Koichi Sakata says.

"We have 4 million subscribers using J-SkyWeb as of today and, as I said, the total number of subscribers is 9.3 million and most of those 9.3 million support both voice and non-voice services."

Entertainment and business

J-Phone also offers ticket reservations, banking and a directional navigation service called Sky-Navi.

"Our services include entertainment and information, as well as business," he says. "But our first focus was entertainment, and then we shifted to business."

For the next jump in network technology, Sakata's company will go straight to a 3G network.

Since Japan's 2G network operates using a unique standard known as PDC (Personal

Digital Cellular), Japan Telecom is being forced to construct an entirely new network for WCDMA.

The reason J-Phone chose WCDMA was the company's desire to achieve integration with foreign networks.

"Our goal is to offer our users services that can be accessed all over the world," says Koichi Sakata.

"WCDMA offers several broadband solutions. We'll be offering various levels of service – 64 kbps, 128 kbps, 384 kbps and even 2MB, which means that we will be able to offer a greater range of data communication services."

Rollout in Tokyo

While new 3G frequencies cost five UK operators 37 billion US dollars and six



Under the leadership of 72-year-old CEO Koichi Sakata, J-Phone is preparing for the next generation of mobile telephony.

Photo: Bruce Osborne

German firms USD 50 billion, Japan's government decided to give them away.

"You can imagine how beneficial it will be in terms of price of services offered to end users."

J-Phone once considered introducing 3G services through a different company than 2G services.

"When we applied for 3G licenses this year we thought it more desirable to keep continuity of services for existing users between 2G and 3G services," Koichi Sakata says.

J-Phone plans to begin testing its WCDMA network later this year, with rollout in Tokyo, Nagoya and Osaka scheduled for the middle of next year. Although some 384 kbps service will be offered, initially speeds will range between 64 kbps and 128 kbps.

Focused on rival

Koichi Sakata has his sights focused on the company's main rival, NTT DoCoMo, which has plans to roll out limited 3G service of its own

in Tokyo, Kawasaki and Yokohama in May, and to expand service to Nagoya, Osaka and other major cities during 2002.

Even so, NTT DoCoMo's i-mode is better known than J-Phone's J-SkyWeb.

"We launched new services prior to i-mode, but perhaps we are behind when it comes to brand recognition."

Several possibilities

Koichi Sakata also views Japan Telecom's foreign partners in J-Phone, Vodafone and BT, as key assets.

"We have a consortium with BT that involves activities in other parts of the world," he says.

In addition to a unified global network, Koichi Sakata believes that the decisive component in 3G networks will lie in the development of image services, especially moving images. Today's services do not really offer the necessary speeds. New services will attract both new and existing subscribers to the 3G network.

"Just imagine all the possibilities that downloading music and videos will provide. There are auction services for business people. Business-to-consumer transactions will become possible, such as downloading images in real time.

There will also be various kinds of combined services such as connecting a mobile phone to a PDA," says Koichi Sakata.

Leeroy Betti
freelance journalist

Our goal is to offer our users services that can be accessed all over the world

Habia Cable

Habia Cable produces a complete range of coaxial cables for the mobile communications industry

Flexiform

Coaxial cable range with a tin soaked braid. Reformable alternative to traditional semi-rigid coaxial cable.

Multibend

Coaxial cable range with a silver plated copper tape and round wire braid. Completely flexible alternative to traditional semi-rigid coaxial cables.

Speedflex

Halogen free coaxial cables with equivalent dimensions and performance to standard RG style coaxials.

Speedfoam

Low loss halogen free communications coaxials, with high foamed PE dielectric and excellent shielding properties.



For more information please visit our website: www.habia.com

Coaxial cables for a mobile world

Habia Cable AB
Tierpsvägen 8, S-815 75
Södertors, Sweden
T: +46 (0)293 22000 F: +46 (0)293 30750
Email: info.telecom@habia.com

Habia Cable Limited
Short Way, Thornbury Ind Est,
Bristol BS35 3UT UK
T: +44 (0)1454 412522 F: +44 (0)1454 416121

“Consumer advocate”

“Mobile phones serve as our handshake with customers,” says Nikolaus Frank, Ericsson’s new head of design.

And that handshake is about to grow firmer. One of his goals is to imbue Ericsson’s phones with a more distinct attitude and identity.

► The setting for *Contact’s* meeting with Nikolaus Frank, Stockholm’s cultural center, Kulturhuset, feels symbolic – the place is teeming with life and motion. Many of the visitors are here to view an exhibition about contemporary British design. Ericsson’s new head of design is at once both reverent and bold.

“The fact that we call mobile phones terminals says quite a lot about how we view the product. Try getting a 16-year-old to call his mobile phone that,” he says with a smile.

He considers the fact that he was offered the new position as head of design as a sign of willingness to change within the company. Nikolaus Frank views himself as a “consumer advocate” – he seeks to understand users and design products that they actually want. That is no easy task in today’s market, given the fact that the entire telecommunications industry is on the verge of a technology shift. Entirely new products will be in demand once GPRS and 3G networks make their debut.

“We’ve got to become better at quickly adapting to changes in the market, while si-

multaneously daring to be the first to market with products that we believe in. As much as we try to be visionary, however, in some cases the answers will still surprise us,” Nikolaus Frank continues.

One of his goals during the coming year is to create a more distinct attitude and identity for Ericsson’s consumer products. Ericsson’s design language will remain one that users recognize, but the technical capacity will be transformed and become more user-friendly. He believes the current divide between identity and design is reflective of an organization that is too decentralized.

Not a one-man show

“That’s the main reason why we’ll soon be opening a new design center in Lund. We’re consolidating all of our design efforts at the core of our operations – designers, product developers, engineers and sales representatives will all be able to work side by side,” says Frank. He does not consider his new job to be a one-man show – in fact, he is very open to discussions with people from all parts of the company, and is quite receptive to new ideas. He has already organized a number of workshops that have yielded positive results.

“It’s essential that designers understand what systems can do in order to cre-

ate a good product. And it’s just as important that engineers understand the importance of design. That’s why collaboration between various areas of expertise is essential,” explains Nikolaus Frank.

From trains to toasters

The key to succeed in consumer products is to understand users, dare to think in new ways and be the first to roll out new products.

“We’ll soon be reaching the stage where not everyone will want the same mobile phone as everyone else, and that will benefit Ericsson,” Frank believes.

Nikolaus Frank has operated his own design consulting business since graduating from the College of Arts, Crafts and Design in Stockholm in 1987. He has designed everything from high-speed trains to toasters, lighting, entry systems, digital drums and DECT phones.

He also considers the fact that he has worked with clients in Europe, Asia and the US as an asset, since it is important to be aware of cultural differences in design work.

In his opinion, keeping industrial design efforts within the company is essential.

“Design serves as your handshake with the customer – the physical embodiment of your technical expertise. There’s symbolic value in retaining design efforts within the company and it is of national interest,” says Frank.

Ulrika Nybäck
ulrika.nybäck@ime.ericsson.se

The fact that we call mobile phones terminals says a lot about how we view the product – try getting a 16-year-old to call his mobile phone a terminal

Vijay knows what young people want

Young people are the driving force for new mobile telephone trends. Vijay Anand, with his background as a DJ in London, is up-to-date with the young lifestyle. He is making sure that Ericsson’s products are readily available to this target group.



► Vijay Anand has started his new job by establishing contacts in key markets and mapping out Ericsson projects that are interesting from a young person’s perspective. Since the beginning of the year, he has spent two to three days every week traveling between the office in London and various Ericsson operations.

“There is such an enormous amount of exciting technology and so many excellent ideas within the company, but we do need to become better at packaging our products. The results of the market research that we have conducted have been very clear: our phones are seen as square and boring. We quite simply have to nurture a sexier image.”

Packaging is not only a matter of design – promoting the Ericsson image in the appropriate settings is equally important. For example, Vijay Anand has been involved in developing such marketing activities as putting Ericsson mobile solutions in the hands of fictional heroes, like Lara Croft in the American adventure film “Tomb Raider.”

“You can’t just put a logo on a product and make out that it’s cool and hip. It doesn’t work – young people can see straight through it,” Vijay Anand continues.

Anand is now 33 years old and can hardly qualify for the young persons’ category, but he nevertheless feels that he is up-to-date.

“I mix a lot with young people and, for example, spend a large amount of time in music clubs. Having a huge interest in music opens the door to many other aspects of youth culture.”

Vijay Anand has been employed at Ericsson in the UK for six years and has managed to make major contributions to establishing Ericsson’s image among young people in that country. Last year, he succeeded in persuading the UK’s Channel Four TV station to broadcast the Homelands dance and music festival live. Ericsson was the main sponsor of the event.

“Naturally, when Ericsson’s name is seen frequently on a TV program that is watched by large numbers of young people marketing results are achieved. The company has a presence in situations that young people recognize and identify with, which has considerable significance.”

The MTV Music Awards is another sponsorship project that Vijay Anand has been involved in.

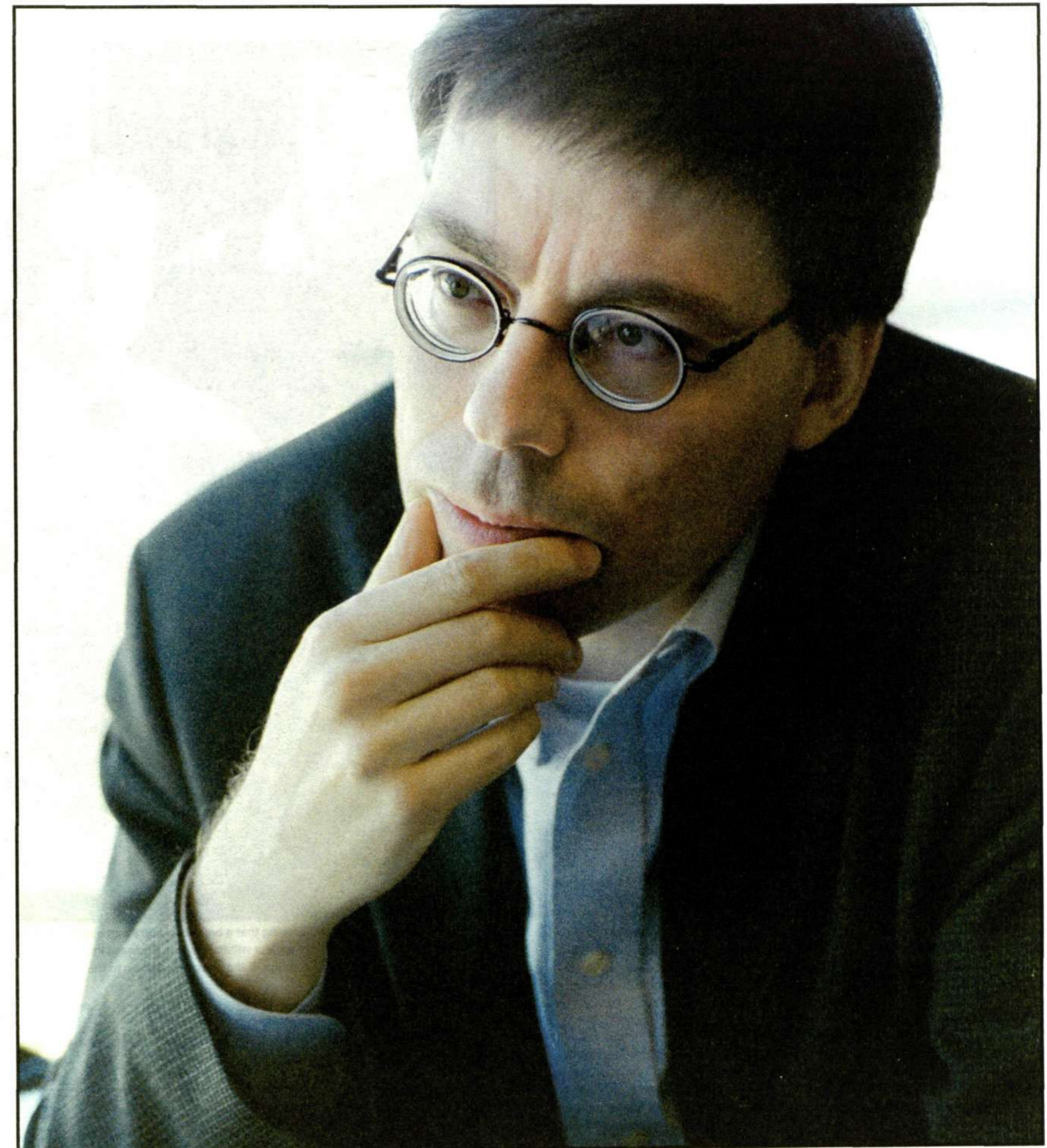
“Personality is important – having an individual profile. You know what it was like at school, where there was always someone who was hip and cool and who all the others emulated. Adult life is not that different,” Anand adds.

Lena Widegren
lena.widegren@ime.ericsson.se

“We quite simply have to nurture a sexier image,” says Vijay Anand.

Photo: Lars Åström

takes up new cause



“There’s symbolic value in retaining design efforts within the company,” says Nikolaus Frank, Ericsson’s new head of design.

Photo: Lisa Selin

FACTS/NIKOLAUS FRANK

Age: 36 years old

Background: Industrial design studies at the College of Arts, Crafts and Design in Stockholm. Design consultant with his own design firm since 1987

Family: Wife Cecilia and a daughter

Favorite Ericsson telephone: T28

Influential designs: Leica camera, Sony Walkman and books

Sources of inspiration: Movies and people-watching

Thinks best: When he is walking at a brisk pace

Controlled madness in the greenhouse

More than 500 ideas have poured in since Ericsson Business Innovation opened its doors in July of last year. The company functions as a greenhouse for promising and innovative ideas.

This year, about five ideas will be developed to the point where they can stand on their own.

► Ericsson Business Innovation was established in July of last year. The company's objective is to identify, and over time create, Ericsson's next best-seller. In addition, the company should support and encourage employees with promising, and sometimes unusual, ideas that do not fit in their own companies or business units. In so doing, the company contributes to retaining employees who would otherwise leave Ericsson because their ideas do not fit in.

Today operations are in full swing. Some 25 potential companies are housed under one roof at Ericsson Business Innovation, which has now moved virtually all operations to Telefonplan,

close to Ericsson's headquarters in Stockholm. Seven projects that have grown sufficiently in stature to be considered ventures will show their products, systems and concepts at the CeBIT telecom show in March. Ericsson's partnership with Swedish insurer Skandia through the company Alleato AB and with Volvo in creating the Wireless Car are examples of ideas that have been supported by the company.

Impressive merits

How does Ericsson Business Innovation know what are promising business concepts?

"The best way is to look back on what Ericsson's innovation projects have achieved over the past few years," says Jöran Hoff, manager of Ericsson Business Innovation. "We were the ones who were responsible for bringing mobile Internet, WAP, wireless LAN, e-services and Ethernet to market."

Today the company is active in five areas: Content and Services, which includes Popwire and Mediatude; the Wireless Car, which is a partnership with Volvo; Home Applications, including broadband Ethernet and Video-over-IP solutions; e-services, such as the e-Box and Bluetooth Applications, which includes Blip.

In addition to supporting the 25 projects within Ericsson Business Innovations, Jöran Hoff and his colleagues try to keep an eye towards the future to see if any blank spots are emerging on tomorrow's map. They spend considerable time thinking about possible areas in which Ericsson should be working but is inactive today.



Jöran Hoff

Currently the company consists of seven hubs, which are located in San Diego, California and Raleigh, North Carolina in the US; Espoo, Finland; Melbourne, Australia; Montreal, Canada; and Stockholm and Gothenburg, Sweden.

Staff members at the hubs field promising ideas and evaluate them. Since the start of operations within Ericsson Business Innovation, some 500 ideas have been received.

When the company believes in an idea, an Innovation Cell is formed. At this stage, the project group determines whether there is a potential market for the product or concept and identifies any legal issues that must be addressed.

After two or three months, a decision is taken on whether to convert the cell into a venture. This lays the foundation for a commercial operation. More money is invested and a product launch is prepared.

After the product has been launched and the first orders have been received, a decision is taken regarding whether the project should be converted into a separate company or retained within Ericsson.

The Ethernet system that was recently sold to Telia, for example, is a broadband solution that was developed within Ericsson Business Innovation and will be retained within Ericsson.

Right balance

Jöran Hoff and his colleagues rely on their experience and intuition in determining whether or not an idea is sound.

"I trust my gut feeling. A really good idea always feels exactly right. But we have to determine whether or not the market is ready for such a product or solution."

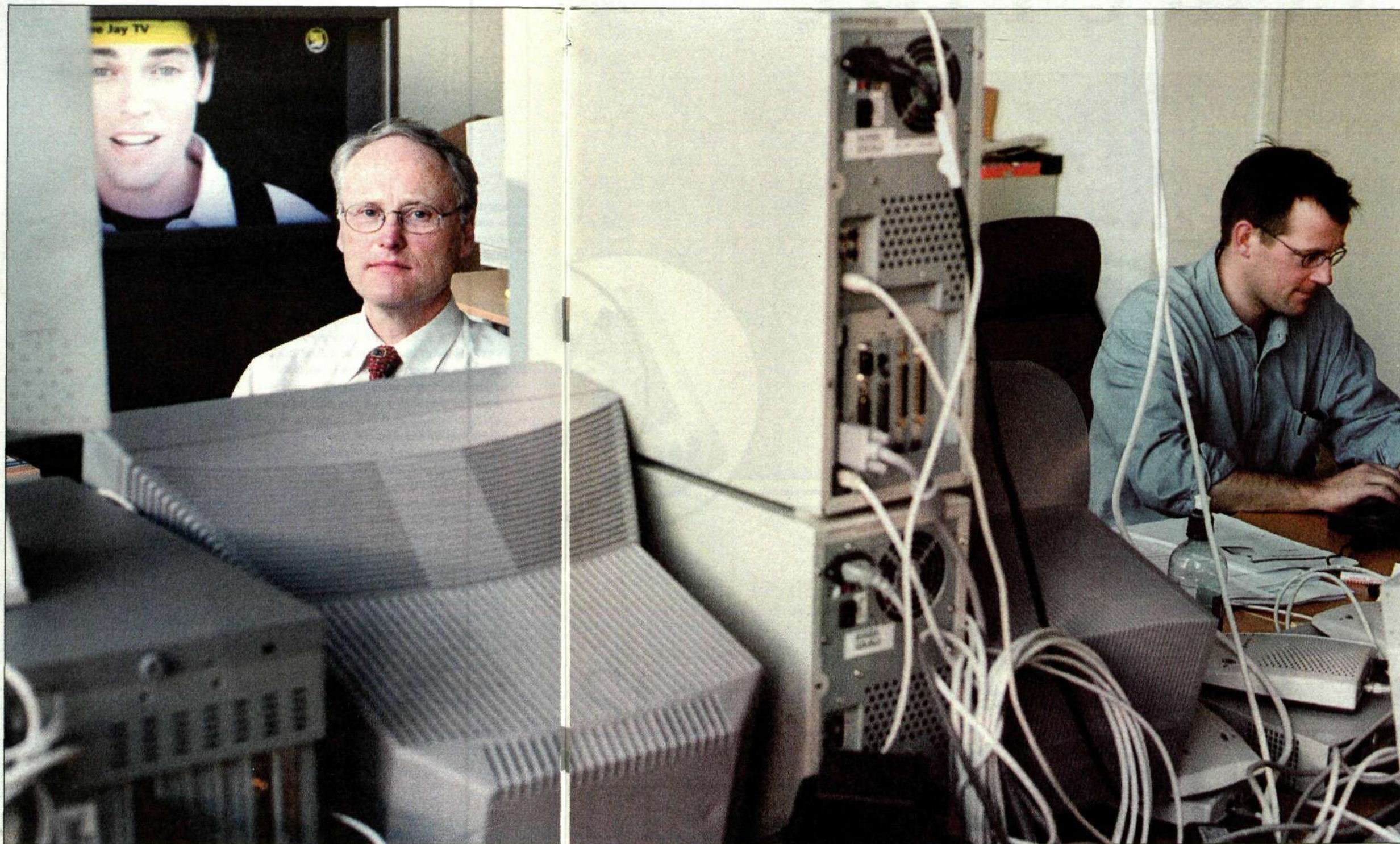
The right balance between technical knowledge, marketing skills, initiative, enjoyment and curiosity is required to create a successful venture.

"We need everyone from mad geniuses to very structured and focused individuals," says Jöran Hoff. "People in our organization persevere, even in the face of adversity. At the same time, we who are responsible for the company must know when it is time to stop a project."

Ulrika Nybäck

ulrika.nybäck@me.ericsson.se

www.ericsson.com/innovation



Hans Eklund has never stopped believing that a broadband Ethernet solution will be Ericsson's next best-seller. The Ethernet project within Ericsson Business Innovation has grown in magnitude and will soon be broken out of the company. Shown to the right is his colleague Magnus Berg.

Photo: Gunnar Ask

FACTS/VENTURES

These ventures from Ericsson Business Innovation are shown at CeBIT:

Terraplay: Real-time gaming
E-Box: Electronic solutions for the home
Blip: Wireless communications via Bluetooth
Multilet: Broadband solution for cable TV networks
DRG: IP telephony for the home
Mediatude: Advertising on mobile phones
Gatespace: OSGI solutions and software for e-Box.

Ethernet next best-seller

Hans Eklund has long been working against the odds. He has been criticized and reprimanded – but he never gave up. Today, there are many like him who believe that optic fiber and Ethernet are the solution for the future.

► Hans Eklund is one of the model employees that Jöran Hoff talks about. He has persevered, even when opposition has been fierce. When his colleagues jumped ship to start their own companies and became rich, he wondered himself sometimes what he was doing. Now the tide has turned, however, and he does not regret staying with the company.

Almost gave up

"I was close to quitting several times, but it never happened. Jöran Hoff was actually the first person who believed in our

system, and that was a tremendous relief," says Hans Eklund with one eye on the clock.

Work is hectic. The Ethernet venture is being broken out of Ericsson Business Innovation but will be retained within Ericsson. We have no end of things to do.

Ethernet is a broadband solution that is currently used for broadband to the home, with some 15,000 lines currently installed in Sweden.

This solution is based on pulling optic fiber instead of copper to each apartment, which means that home users can send and receive information at 100 megabits per second, thus paving the way for new services, such as video.

Hans Eklund has been working with optic fiber technology for more than 20 years and is convinced that this is the future. "Optic fiber has no limitations with respect to speed. You can achieve terabit speeds, meaning a thousand gigabits, but peripheral systems must also have the same capacity to deliver really high speeds," says Hans Eklund.

Being moved to Ericsson Business Innovation was a relief for Hans Eklund and his colleagues. Not only did the compa-

ny believe in him. He also received help with contract issues, marketing strategies, purchasing and other good advice.

Increased interest

Over the course of more than two years, the Ethernet project has grown in scope and developed to the point where it is now ready to stand on its own feet within Ericsson. Exactly where in the organization it will be placed will be decided shortly.

Ericsson recently signed a framework agreement that includes the Ethernet solution with Skanova, a company owned by Swedish operator Telia. This is the first time an established operator is building a network of this type. Increased interest is now being noted from customers around the world.

"We are engaged in discussions with operators in Europe, Australia and Latin America," says Hans Eklund, smiling proudly.

Ulrika Nybäck

From war zone to Peace Prize



Fifty years ago, the entire Korean peninsula was a war zone. Seoul lay in ruins.

Last year, the President of South Korea, Kim Dae Jung, was awarded the Nobel Peace Prize.

Today, Seoul is a modern, high-tech city populated by fashion-conscious residents with voracious appetites for new technology.

► The townscape of modern-day Seoul is totally dominated by skyscrapers and huge TV-screens that show advertising films around the clock. It's a hectic metropolis with a population of slightly more than 10 million.

Seoul residents are well dressed in the latest European fashions, maintaining a balance of discretion and exclusivity. A very large-scale consumer society flourishes in the city. Stores are open late and shopping continues long into the night.

The Republic of Korea, or South Korea, was established as recently as 1948, when the US ended its occupation of the southern half of the Korean peninsula. Until the 1960s, Korea's economy was based largely on agriculture.

Since then, however, Korea has undergone an extremely rapid process of industrialization. The

Only about 10 years ago, Korea was still a country scarred deeply by war and conflict. In the new millennium, the country is moving toward reunification and, in South Korea, a strong nation focused on high-tech advances is emerging. Photo: Lisa Selin

country's GDP rose nearly 10 percent annually from the mid-1960s to the mid-1990s. During the course of one generation, Korea has developed from one of the poorest countries in the world to a powerful industrialized nation.

Focus on IT

The Asian Crisis in 1997 had serious negative effects on the Korean economy. As part of efforts to get the country back on its feet, the government elected to focus on IT and the Internet. To

support rapid expansion of broadband as much as possible, the Korean government forced telecom operators to offer broadband services and lower prices. Internet courses were offered free of charge to housewives as part of the country's focus on IT.

Korea ranks tenth in the world in terms of

FACTS/KOREA

- Population: 46 million
- Population growth per year: 0.9 percent
- Capital: Seoul (10.2 million residents)
- Language: Korean
- Religions: Buddhism, Confucianism, Christianity
- Form of government: Republic
- Currency: 1 won (KRW) = 100 chon

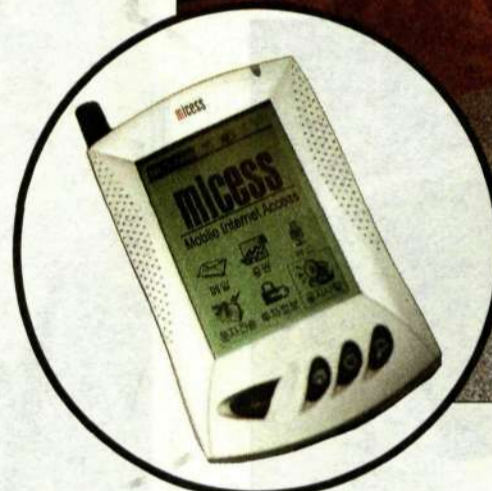
Internet density, with 20 million users, and 27 million Koreans have mobile telephones.

Prize for easing tensions

When Kim Dae Jung was elected President of South Korea in 1998, one of his campaign promises was that he would ease tensions between North and South Korea and, perhaps, seek reunification with North Korea.

Last year, Kim Dae Jung was awarded the Nobel Peace Prize for his efforts. Relations with North Korea are improving. The border is far from open. But the many families that were separated when Korea was divided at the 38th parallel have now been given a chance to meet again, for the first time in more than 50 years.

Sara Morge
sara.morge@ime.ericsson.se



Moon Hong and Eun Young Ahn of KITC, a stockbrokerage firm, believe the Miness terminal has many advantages compared with similar handheld computers now available on the market.



Stocks and horses in the same terminal

The stock market and the legal betting industry have a great deal in common. It's all about picking the right horse. Intec Telecom, an Ericsson partner, has developed and launched Miness, a wireless PDA (Personal Digital Assistant) powered by Mobitex, that enables users to invest in horses and securities.

► Peace and quiet prevails at the stock market in Seoul. Stock prices are flashed on a large board, but the market's eager buyers are conspicuous by their absence. Most securities trading in Korea is conducted via the Internet, from private homes and, in some cases, from people's offices.

"More than three million Koreans are active stock market traders. The popularity of securities trading is probably attributable to the fact that we Koreans like to take risks," says Won Baek, President of Intec Telecom.

Intec Telecom is a relatively small company with offices in Seoul's modern commercial quarter. Won Baek proudly shows off his company

and the devices that support its Mobitex services, which is situated behind a glass wall. Ericsson's logo is displayed everywhere, since the infrastructure for Mobitex was supplied by Ericsson.

"I am very fortunate to work with Ericsson. I am extremely satisfied with our partnership thus far, Ericsson has really supported us," says Won Baek.

Multifaceted device

Mobile data is hardly a novelty in Korea, and similar handheld devices are already available on the market. But the market is characterized by rapid development, and newcomer Intec Telecom is charging ahead to success in the industry. Miness is an acronym for Mobile Internet access, and Intec's handheld was the first to use Mobitex for these types of services in Korea.

"The display is much larger than on other hand-held devices. The menu is easy to understand and selections can be made by simply clicking on the icons," says Moon Hong Jo of the Korean Investment Trust Management & Securities Company (KITC).

The Miness terminal is unique in that it offers many services and applications in a sleek handheld device. It was not only designed for wireless stock trading. It can also be used for web browsing, mobile e-commerce, sending and

FACTS/INTEC

- Founded 1996
- Entered strategic alliance with Ericsson in May 2000
- More than 40 employees
- Market value: about USD 16 million
- Operates one of the world's largest Mobitex networks, comprising nearly 500 base stations



receiving e-mail and playing interactive games with other users.

Since users only pay for the amount of data that is transmitted, the service is cheaper than conventional Internet access. This is particularly true for interactive games, chess for example, which demands a great deal of time to decide on your next move but which requires only a small amount of data to be transmitted for each move.

Focused on stock traders

Initially, the launch of Miness has been focused on stock traders, with about 1,000 terminals distributed via a few stockbrokers.

Intec Telecom's goal is to sell 100,000 handhelds this year, with stock traders accounting

FACTS/MOBITEX

Mobitex is a narrowband system for dedicated wireless packet data networks. The system offers users continuous access to a large number of applications, such as securities trading, games, e-mail and news service, as well as the capacity to download information from databases and other services.

for about half and private persons for the other half.

Sara Morge



Whether you're at a music recital or selling fish, Korean mobile phones are personalized for different users.

Photo: Lisa Selin

Mobile words of wisdom

Compared with Korean mobile phones, most of the models that are common in Europe look like unwieldy bricks. The Korean phones are small, sleek and emphasize personal functions.

► "New models are small, with large displays. They are specially designed for different customer segments," says mobile telephone retailer Chang Joon Ho.

"Here we have a red phone for ladies, for example, with very female functions, that tracks the user's menstrual cycle and displays her horoscope."

Koreans wear their phones very visibly, almost like jewelry, so that it is not enough for the phones merely to be functional — they must also be attractive and have fun accessories.

Design as important as function

Most Korean mobile phones weigh no more than 70 grams and many Koreans like to carry them on a chain around their necks or on their wrists.

Although the phones are small, the display is quite large. The case is usually flat, but when the phone is opened, the display is often on one side, and the keypad on the other.

The phones are also designed so that the distance between the microphone and the mouth is kept short.

Because fashion is important when it comes to phones, many Koreans change their phones as often as twice a year. Last year, 14.5 million phones were sold in Korea. To protect the environment, the government recently prohibited operators from subsidizing phones. As a result, sales are tapering off.

Ericsson's World phone searches in vain for a network when turned on in Seoul. The fact is that neither Ericsson nor Nokia make any phones that work here. Korea was one of the first



Small and sleek, phones are almost like jewelry in Korea.

countries to adopt the CDMA standard. To reduce competition and thus favor domestic industry, the Koreans chose their own standard and frequencies.

Constantly developing new services

In the Korean market, local manufacturer Samsung is the giant, with fully 50 percent of the market, followed by LG, Motorola,

Hyundai and several smaller manufacturers. Korean mobile phone manufacturers are also very advanced with respect to developing new services.

Samsung has produced phones that can display video and which will be released in the spring.

Sara Morge

Ericsson well in the race

Ericsson has achieved considerable success in Korea recently. Several major orders have been won in stiff competition with both Cisco and local suppliers. To strengthen its market positions, Ericsson has also forged strategic partnerships and taken ownership stakes in Korean companies.

► "Here in Korea, Ericsson is seen as the strongest player in mobile communications. We at Dacom look forward to closer cooperation with Ericsson in this area," says Byungchang Choi, manager for Internet planning at Dacom.

Dacom is the second largest Internet operator in Korea, with nearly 40 percent of the total

market. Demand for Internet services is growing explosively, and to meet customer demand, Dacom must double capacity at least twice each year. Dacom has now elected to replace its Cisco routers with Ericsson equipment.

Best routers

"Ericsson's routers were without question the best alternative. They offered the best quality at the lowest price," explains Byungchang Choi.

Another important contract was won last autumn, when Korea Telecom Freetel, the world's fastest growing CDMA operator, selected Ericsson's Packet Backbone Network for its new mobile data network.

Ericsson and the CDMA supplier 3IC signed a strategic partnership agreement at the beginning of the year. According to the agreement, 3IC will distribute Ericsson's equipment for wireless data communication in Korea.

This has developed into more than a partnership. Ericsson is now a major owner in 3IC, with 19 percent of the shares.

"This is really something big, since this is the first time a partnership has been created at this level in Korea. Now Cisco, Nortel and Lucent are trying to find similar deals," says Kent Holiday, Vice President of Ericsson Korea.

Investments

Among the Ericsson products that 3IC will distribute are data products for cdma2000, cdmaOne Interworking Function (IWF) and Packet Core Network (PCN).

Last autumn, Ericsson invested SEK 360 M to purchase a 10-percent stake in e-com-



Dacom is Korea's second-largest Internet operator. To meet customer demand for a doubling of network capacity, Dacom purchased new routers from Ericsson.

merce company Littauer Technologies, which is listed on the KOSDAQ exchange and is the Korean leader in e-commerce solutions.

Sara Morge



No foreign company – not even Ericsson – can enter the local market without a Korean partner to open the door.

Local partners essential for success

The Korean market is completely dominated by local companies. For foreign companies, having the best or the cheapest product is not enough. Success demands having contacts, working hard and showing loyalty.

► Few Volvos, Mercedes and Fords ply the streets of Seoul. Cars here are of the latest models and amazingly similar. The names of the manufacturers are Samsung, Hyundai, Daewoo and Kia. The same applies to mobile phones, where the leading manufacturers are Samsung and Hyundai and there is not an Ericsson or Nokia phone to be seen.

The Korean market is totally dominated by a few conglomerates. Hyundai, Samsung, LG and SK are active in most sectors, from telecom to gas stations.

Local companies favored

Korea has a highly patriotic business culture. This, in combination with the fact that the government often exerts pressure to help local companies, makes Korea a very tough market for foreign competitors.

Ericsson, however, has long been active in Korea, and the effort that the company has in-

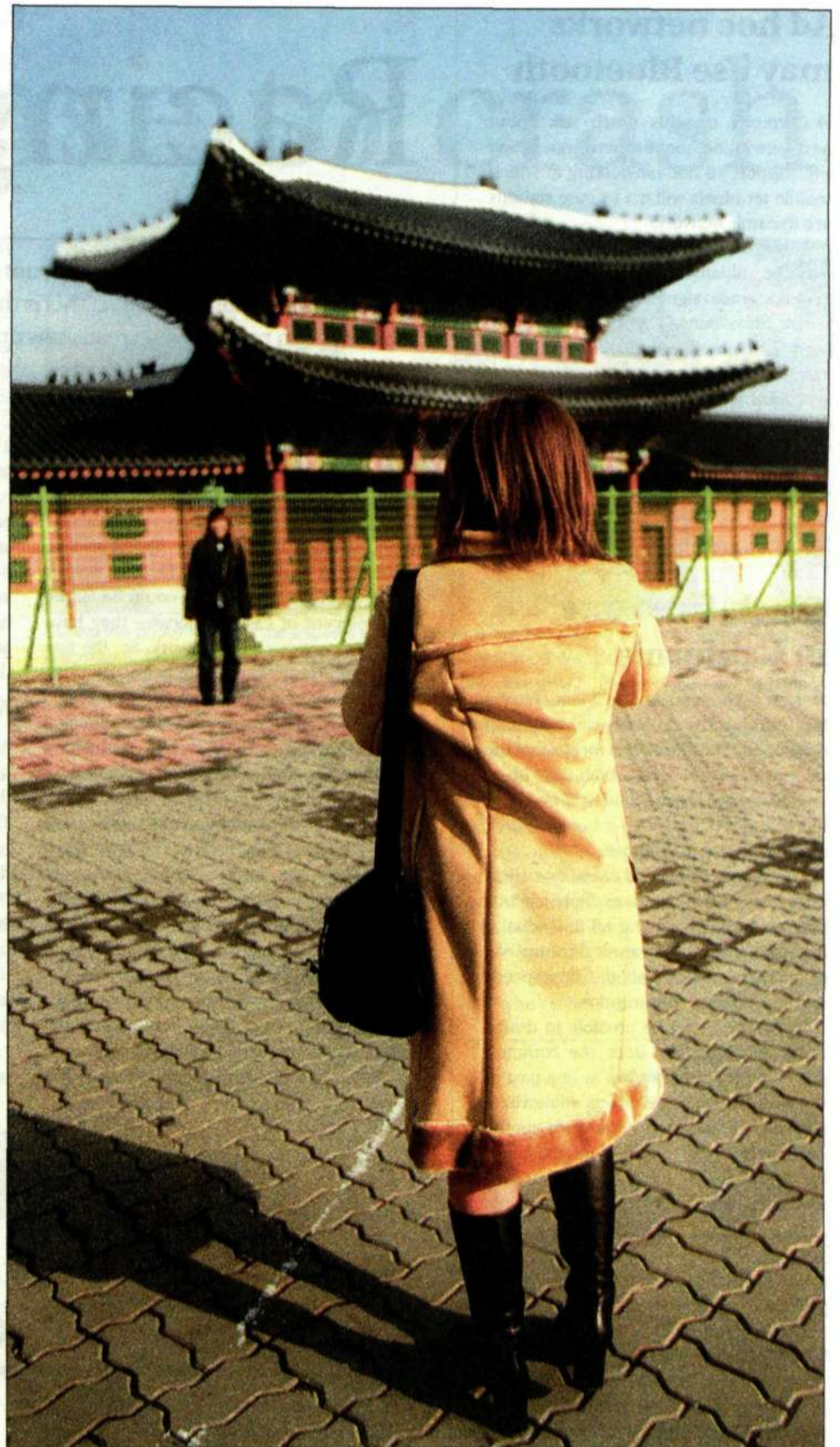
vested in opening up the market is now beginning to pay off.

"Things are looking good for Ericsson here in Korea. We are now quite well known in Korean industry and are starting to take market share from local competitors. A lot of things are happening now," reveals Janos Fügedi, President of Ericsson Korea.

Ericsson delivered its first telephone to the Korean emperor as early as 1898. It was not until the 1980s, however, that Ericsson established a major presence in Korea. At this time, offices and a manufacturing plant were opened, and Korea became one of Ericsson's largest markets for AXE. In 1991, when all know-how had been transferred to local industry, the plant was sold, and Ericsson had to be content with a less prominent role until



Janos Fügedi



Bridging gaps, both cultural and corporate, is essential for foreign companies wishing to do business in Korea.

1996, when prospects began to improve. In late 1998, Ericsson began major new investments in Korea.

Partnerships important

"To succeed in the Korean market, it is essential to forge strong partnerships," says Janos Fügedi.

"Without partnering with the large conglomerates, you don't have a chance here. They protect local industry fiercely and it is therefore not possible to succeed without a local partner to open doors."

Not just any partnership will do, according to Janos Fügedi. The choice of partner must be considered very carefully.

"In fixed telephony, for example, we have to listen to what the two local operators want and make sure that we partner with the right company," explains Janos.

In 1995, Korea became the first country in the world to introduce CDMA as its standard for mobile telephony. This made Ericsson's re-entry into the market more difficult.

"We had neither phones nor systems for CDMA, so we had to rely on marketing our fixed networks and Mobitex. But we are getting stronger and stronger in CDMA, and we are

also very competitive in terms of price. Since CDMA was a protected market, there was no pressure on prices," says Janos Fügedi.

On December 15 of last year, SK Telecom, the world's seventh largest mobile operator, and Korea Telecom were each awarded a WCDMA license, thus creating new opportunities for Ericsson.

Taken by surprise

"Not only did Korea, the bastion of CDMA, choose WCDMA. Local companies were taken completely by surprise and are now eager to partner with Ericsson and other suppliers. The new situation here with respect to wireless infrastructure gives Ericsson a chance to make a big comeback, 20 years after the first big wave," observes Janos Fügedi.

It is in fixed networks, however, that Janos Fügedi believes that Ericsson Korea now has a chance to re-establish itself as a major player.

"Local industry has invested all its resources in wireless, thus weakening its position in fixed telephony. Ericsson hasn't chosen the same strategy, and I see a very bright future in fixed networks, particularly with Engine."

Ad hoc networks may use Bluetooth

» Currently there is much talk about next-generation mobile networks which will support ad hoc-networking in which mobile terminals will act as base stations in a dynamic network.

A key component in these networks may be Bluetooth, which uses high-frequency radio signals.

The Scandinavian software company Pocit Labs is developing BlueTalk for mobile terminals based on Bluetooth. The new technology automatically creates ad hoc networks between several users located in the same area.

The first BlueTalk product is expected to be launched in June.

www.pocitlabs.com

Clock-free zone in California

» Ivan Sutherland at Sun Microsystems has introduced a clock-free zone for chip developers. Put simply, this means that the microprocessor's clock, which ticks up to 1.5 billion times per second, will be eliminated and replaced with a new solution, reports the New York Times.

The new technology is called asynchronous logic and is based on digital circuits that are switched on and off individually, instead of under the tyrannical control of a clock. The result will be higher data speeds and lower power consumption.

Hopefully, it will be possible to design chips more quickly, since the common problem of a modification in one part of the chip causing side effects somewhere else will be eliminated. Whether or not the new technology is about to achieve a breakthrough is subject to discussion among researchers.

TECH-TIP

Cheap connections when traveling

» Employees traveling on business can save considerable sums for Ericsson by using a local exchange for data connections, instead of paying hundreds of dollars for long-distance connections.

Connecting a computer to Erinet, Ericsson's intranet, from a hotel room abroad can be very expensive. Erinet has only a few access points, RACOM nodes, often just one in each country. A connection from City A becomes a long distance call to City B (hosting an access point), which given expensive hotel telephone charges, can cost a considerable sum.

If employees instead use the ESOE-certified application PAL to connect to RACOM over UUNET's global IP network, which has about 600 access points throughout the world, it is easy to find a local access point.

The connection then counts as a local call, costing less than one dollar for an unlimited time. Use of the IP network costs about USD 6 per hour, which is less than half the cost of a long-distance connection, which can also fail.

PAL can be ordered through PC support and is installed over the network.

The problem with RACOM is not as serious in all countries, but it is worthwhile finding out what is considered a local call in each country and then using PAL.

www.uu.net

racom.ericsson.se

Racing ahead –

Imagine a small group of people that not only has the right to fail, but must have a failure rate of 50 percent. This is the Innovation Cell in Montreal – about a dozen people, who create new products in a very short time, using the most unconventional methods.

» "We generally compare our Innovation Cell to a Formula 1 car," says Graham Osborne, who heads the development of the Jambala application platform at Ericsson's research and development office LMC in Montreal. The Innovation Cell has to work fast and with a high level of risk. We actually count on failure in 50 percent of cases, otherwise they have been too cautious in their work. So, the fact that they currently succeed in two out of three cases is, in a way, a kind of failure."

This is what Graham says, but neither he nor anyone else at LMC seems dissatisfied with the fact that everything is working so well.

"When Jan-Erik Andersson and I started this unit a few years ago, the goal was to create a bridge between pure research and pure product development," says Göran Fröling, president of Ericsson Canada. "The process is basically that the developers in the Innovation Cell, who are the sharpest we have in the company, create ideas from which we make selections and which I pay for in the early stages. However, sponsors from Ericsson's product units then have to be found. If we find

a strong business concept, the project can live on, otherwise we terminate it."

The term innovation cell is not entirely new, but what sets the Innovation Cell in Canada apart from the rest is that it works to design products quickly, instead of carrying out research over the longer term. What is actually happening is that products are designed that are 60-70 percent finished and are much more than mere prototypes.

Innovation in Montreal

It is important to be able to show customers more than "slideware," that is, overhead slides. They should see actual hardware and software that works. To make sure the work proceeds quickly, 80 percent of the items used are commercial products and software, which are used to glue together new solutions.

As was mentioned, the Innovation Cell is working on Jambala, which is Ericsson's open

platform for the development of applications. Jambala is compatible with all types of networks – today's GSM, TDMA and CDMA mobile standards, tomorrow's WCDMA standard, and wireline networks. The core of the Innovation Cell consists of a maximum of ten persons. They must not expand, because then the flexibility would disappear and the administration would grow. The fact that the cell is small is a prerequisite for being able to take greater risks.

When working with a new product, a few people are borrowed from the appropriate product unit. When the work is done, they return to their unit, while the cell core throws itself into new projects.

Triple A in 9 months

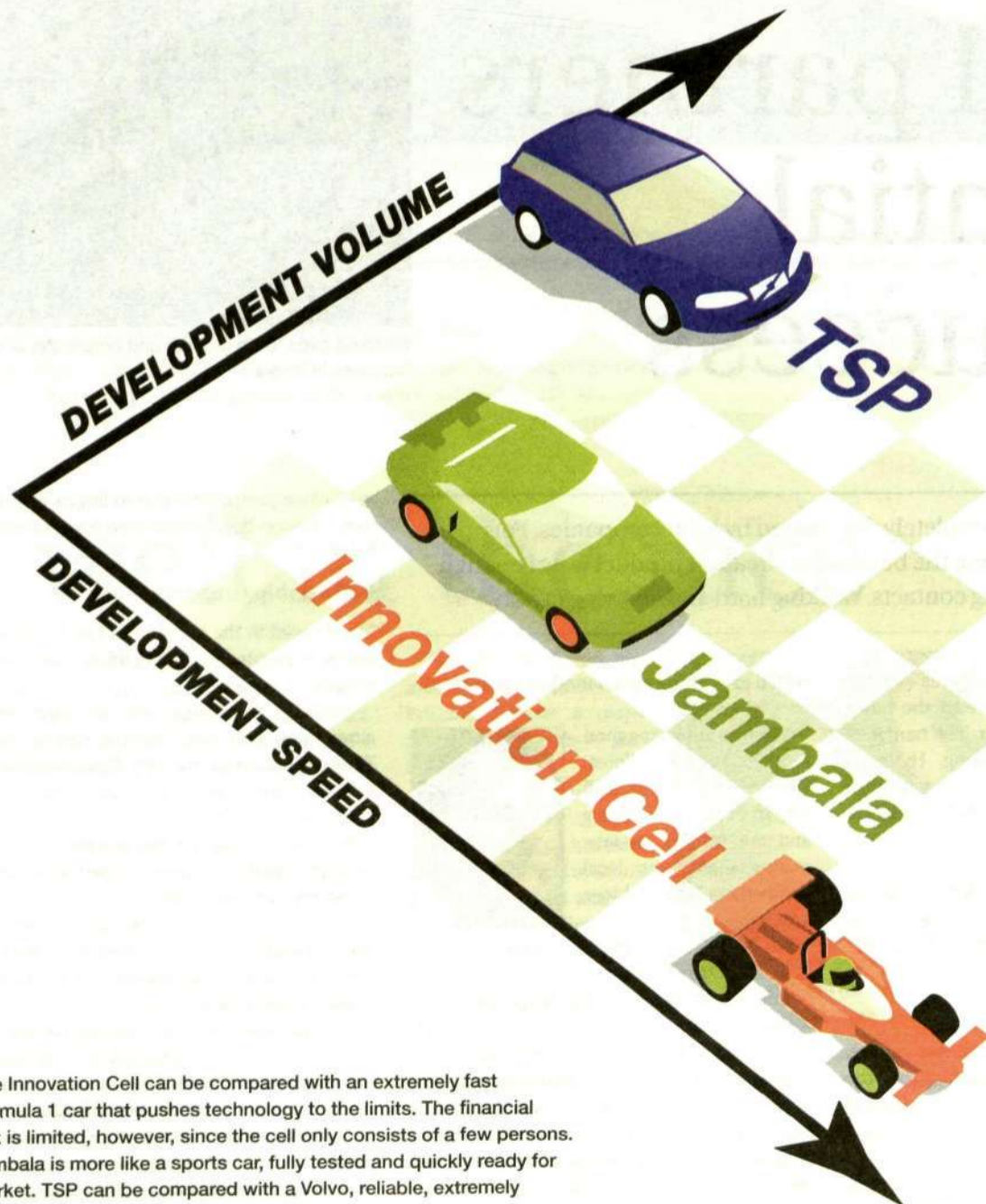
There are already several examples of products born in the Innovation Cell. One of these is AAA – Triple A – which can be described in

simple terms as a Home Location Register (HLR) server for the Internet. The three A's stand for Authentication, Authorization and Accounting, all in one server, which is able to handle more than five million subscribers.

The AAA server was designed by ten people over nine months. It was ready for delivery to the customer, the

What normally takes two years, these people do in six months

Göran Fröling



The Innovation Cell can be compared with an extremely fast Formula 1 car that pushes technology to the limits. The financial risk is limited, however, since the cell only consists of a few persons. Jambala is more like a sports car, fully tested and quickly ready for market. TSP can be compared with a Volvo, reliable, extremely robust and produced in high volumes.

Illustration: Martin Gradén

with a license to crash

Service Capability Servers & Applications (SCSA) product unit, in summer 2000 and will be launched in the market during spring 2001.

"We started in November 1999," says Steven Rochefort, who has been working as head of the Innovation Cell since then. "The question was whether it would be possible to build a high-capacity AAA on our TSP/Jambala platform. Jan-Erik Andersson, who was head of technology at LMC at that time, asked if I wanted the job of quickly designing a product that we could show people. I said I didn't want to build any prototypes, because I had had experience of them, and was told that I could build a product that was not completely finished, but that could be used."

Mission impossible

With complete freedom, Steven then began what he rather regarded as a "Mission Impossible." He involved the people he wanted from various product units, always with a focus on the appropriate expertise.

It transpired that up to 20 years' experience in this area was more important than precocious genius.

In this project, persons with long experience, up to 20 years in some cases, were more in demand than young stars. The average age is actually as high as 35-40 years.



Steven Rochefort

"The people I wanted had to be highly skilled and independent, and also had to have the ability to learn new things, but they didn't necessarily have to be experts," says Steven. "I also wanted to have people who could work efficiently for 7-8 hours a day, instead of people who burn themselves out working 12 hours or more every day."

Working as a small, close-knit team, with a large amount of freedom and without time-pressure from a paying customer, suited the cell. The AAA work followed the design process. What could the system handle? How can we create added value?

The group soon entered uncharted territory. Software and hardware were developed at the same time and were already being tested in the lab in March 2000. Subsequently, consultants were employed to create a demo that could be shown to customers on July 14, 2000.

In August, the product unit took over, with some joint work taking place at the time of transfer. All that remains for the Innovation Cell is to answer questions about AAA.

Highly impressed

The product unit that took over AAA was SCSA, whose responsibilities include HLR and SCP (Service Control Point) for all mobile standards.

"Jambala is also suitable for Internet applications and we wanted to use AAA to create a server that could support millions of users," says Miguel Cobo, head of Home Environment



During the photo session, the experts quickly became tired of posing and got involved in a real discussion. Steven Rochefort explains an idea to Benoit Trembley, Benoit Lalumiere, Madi Hirab, Peter Helfer, Trung Huan Nguyen and Sebastian Bournival. Photo: Rosamund Parkinson

Solutions at SCSA. "The new 3G network is about high capacity, while it must also be robust and never go down. These are exactly the properties of Ericsson's TSP/Jambala platform. Our office in Spain has now taken over responsibility for the product and we had people from there in Montreal for three months working on the design."

"We must be able to show our customers how to transfer to IP - that is why we are building our applications," explains Maya Migioti, head of strategic product management at SCSA. We are planning a 3G program that will include a new Home Environment Server (HES), which is defined in the 3GPP standard.

We believe that we are highly advanced in this respect."

Miguel Cobo and Maya Migioti are extremely satisfied with the work done in the Innovation Cell.

"These people are very smart, fast and flexible," says Miguel. "When we put questions to them, we have suggestions within a matter of hours, which is completely different to what we are used to. They know everything and working there is an excellent experience for those who get the chance."

Lars Cederquist

lars.cederquist@me.ericsson.se

Key to research success

LMC, Ericsson's research center in Montreal, has a key function within the company. Having previously been responsible for the development of the mobile system for the TDMA standard, LMC now has considerably broadened responsibility.

► The center now works with all standards, including GSM, CDMA and 3G, with the main area being the open Jambala platform for ap-

plications development. However, Global Services also has major operations, including customer and installation support. LMC has taken on increasing responsibilities and the workforce has more than doubled in five years, from about 700 people to more than 1,700.

Positive spiral

"We have entered a positive spiral," says Göran Fröling, head of LMC. "The main reason is that we have a positive corporate climate here in Canada and this has given us access to highly skilled personnel. We are now the single largest development organization outside Sweden

and we have a high level of competence that can be used throughout the company for product development."

Small-scale start

Ericsson's history in Canada began in 1985, when the company was to build out the Canadian operator Cantel's mobile network and the customer demanded that Ericsson start up operations in the country. This was done, and what started out with 50 people, soon proved to be a very vibrant organization.

"But a lot has changed over the years," says Göran Fröling. "Everything moves faster and

there is a lot more to think about today. We have to be open and adopt other people's solutions, while sharing our own. The Innovation Cell is a natural feature in this context.

"However, I believe that we have reached a point at which we must consolidate and not expand quite so fast. We must be best at what we do and, in saying that, I am referring to Jambala. We have made an important decision to expand our collaboration with Ericsson's Utveckling AB for the TSP server platform, on which Jambala is based."

Lars Cederquist

FACTS/THIS IS TSP

TSP is Ericsson's server platform for third-generation (3G) service networks. Examples of applications that are hosted on TSP are AAA (Authentication, Authorization and Accounting), DNS (Domain Name Server), MGC (Media Gateway Controller) and mobile e-commerce.

The Jambala Application Layer, J-AL, is a framework built on top of TSP that uses TSP's core functionality to enable it to offer carrier-class performance, meaning excellent real-time characteristics and the same high reliability as in the telephone network. Together, TSP and J-AL constitute what is market as the Jambala Application Platform.

TSP is responsible for the system's infrastructure. The platform, which is based on an architecture with several layers, uses industry standards. Application programs are written in C++ and/or Java. Corba/IIOP, TCP/IP and Java RMI ensure interoperability.

To allow third-party suppliers to easily implement their software, commercial hardware is used.

High availability can be guaranteed in part because the system is highly fault tolerant and redundant, meaning that if one part of the cluster fails, another can take over. Other features include online backups, adaptive configuration of hardware and automatic restarting of software. If catastrophic events such as fire occur, all data in the cluster is preserved, since it is replicated to another cluster in a separate geographic location.

Scalability is achieved by using loosely coupled processors and a unique distribution system. The core of TSP consists of TelORB, which is a distributed operating system, and middleware that provides extremely high availability, scalability and real-time performance.

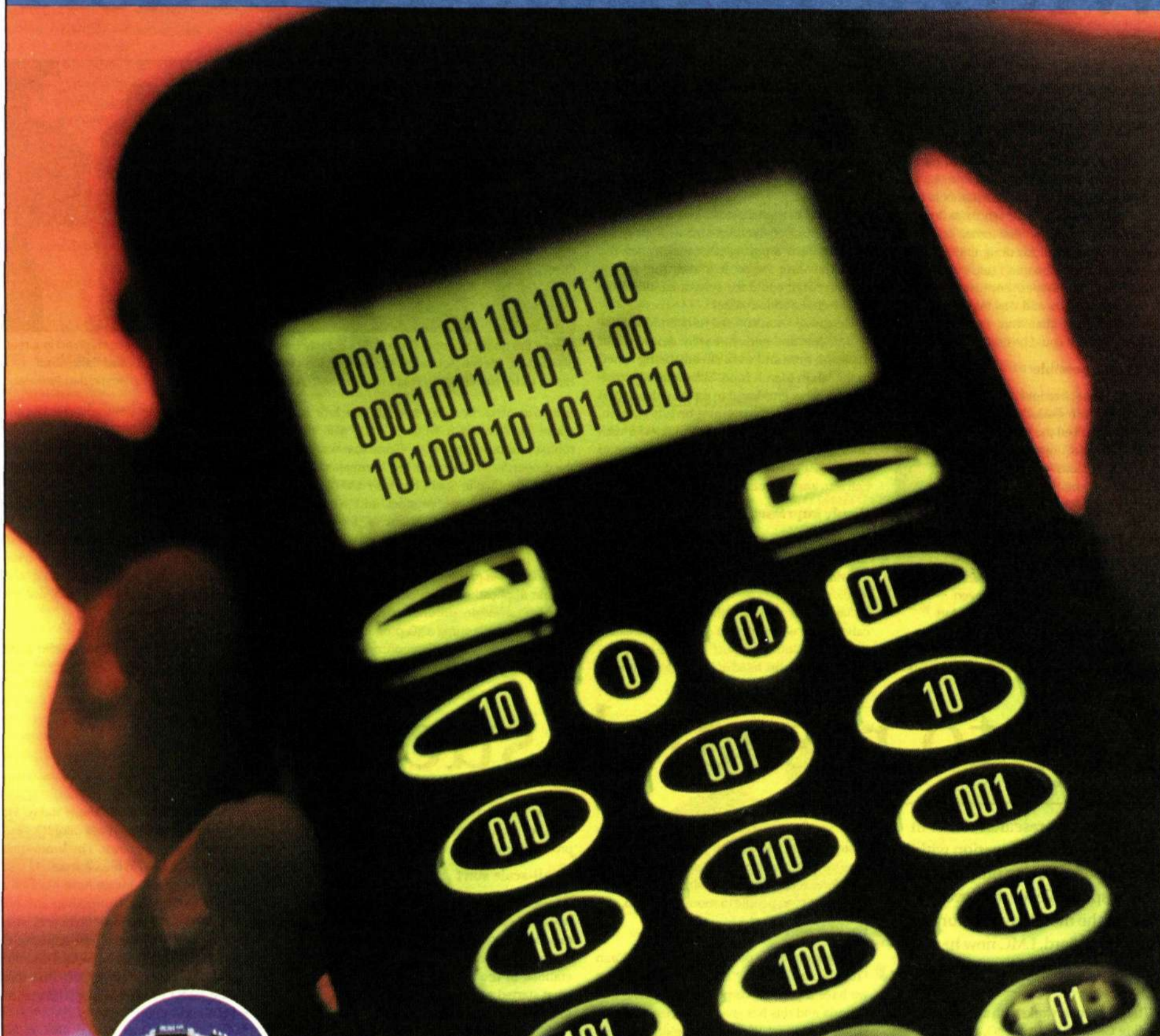
TelORB will also support Linux components in the cluster with similar functionality.

FACTS/THIS IS JAMBALA

Jambala offers operators of mobile and fixed networks, as well as service providers, a platform for next-generation applications and services. Development of the platform, which is open and scalable, began in December 1998. Today there are a number of competitive and cost-effective applications and services, including Service Capability Server (SCS), Authentication, Authorization and Accounting (AAA), Jambala Application Server (JAS), SCP and WIN services, HLR, Jambala Mobility Gateway and WAP Gateway, all of which have been developed in accordance with the TDMA, CDMA, GSM, WCDMA and fixed network standards.

Soon three years old, Jambala continues to grow and now has products in 18 countries throughout North and South America, Europe, Asia and Australia. There are now 57 installed Jambala nodes with 24 operators serving more than 20 million subscribers.

**Without Analog Technology,
You Can Only Say So Much.**



In fact, without analog you can't say anything. Analog circuits transform your voice into the electronic signals that move through phone lines or via wireless transmission, and then translate the digital data into understandable information on the other end. Small wonder that today's most advanced "digital" phones have more analog circuit content than yesterday's pure "analog" phones. And National Semiconductor is leading the way. Our advanced analog semiconductors enable mobile handsets to provide better audio quality, stronger signals for more stable connections, and increased talk time through power efficiency. In short, National's analog innovations are turning the world of ones and zeroes into information that makes sense.

 **National**
Semiconductor
The Sight & Sound of Information

Broadband via radio connects 3G networks

LMDS licenses are currently being issued all around the world. Nevertheless, opinions remain divided over how this new, wireless broadband technology should be used.

Ericsson has long had a strategy in place. It deals, in part, with the role that LMDS will play in the deployment of 3G networks.

► As the deployment of next generation mobile telephony accelerates, new and exciting opportunities for Ericsson's LMDS solution, MINI-LINK BAS, are opening up.

It is an ideal solution for linking together base stations in a network, but also for those 3G operators who want to offer a broader assortment of services to subscribers, explains Hans Herbertsson, head of marketing for MINI-LINK BAS.

"With LMDS, 3G operators can provide broadband fixed access to companies that have contracted mobile telephony service for their employees. It is, quite simply, a complete solution, using broadband the whole way,



Hans Herbertsson

from mobile terminal all the way to the company's local network," says Hans Herbertsson.

LMDS, or Local Multipoint Distribution System, is a technology for broadband access. Instead of running fiber-optic cable into every home, information is sent via radio. A central terminal, a node, is connected to the fixed backbone network. Information is distributed from the node via radiowaves to terminals at connected companies and residential complexes.

MINI-LINK BAS is a product of Ericsson Microwave in Mölndal.

North America first

The US and Canada awarded the first LMDS licenses as early as 1998. The rest of the world has followed their lead, and there are now licensed LMDS operators throughout the world. Half of the European countries have issued licenses, with the remainder expected to do so in 2001.

Due to differing ambitions on the part of various suppliers with regard to how the technology should be used and the resulting ambiguity, the LMDS market had been slow to take off.

In Southern Europe, where the first licenses were issued, broadband remains

a non-starter. In Spain, Portugal and to some extent even Germany, operators and government authorities have instead viewed LMDS as a way for new operators to enter the market for fixed telephony and ISDN.

Those efforts have proven to be problematic, however. LMDS is not optimized exclusively for narrowband access. New operators are having a difficult time competing with the old telcos that have their existing, time-tested copper networks to fall back on.

When Ericsson talks about LMDS and MINI-LINK BAS, the intended application is broadband services.

MINI-LINK BAS is marketed as a complement to fiber as a solution for operators who want to provide such broadband services as Internet connections, and LAN interconnect, to businesses.

In Scandinavia, where Internet usage has matured, and business users are demanding broadband, the market is receptive to Ericsson's strategy. Norway's EITele and the Netherlands' KPN Qwest, have constructed MINI-LINK BAS networks in Oslo and Helsinki, respectively, with new operators waiting in line.

Complements fiber-optics

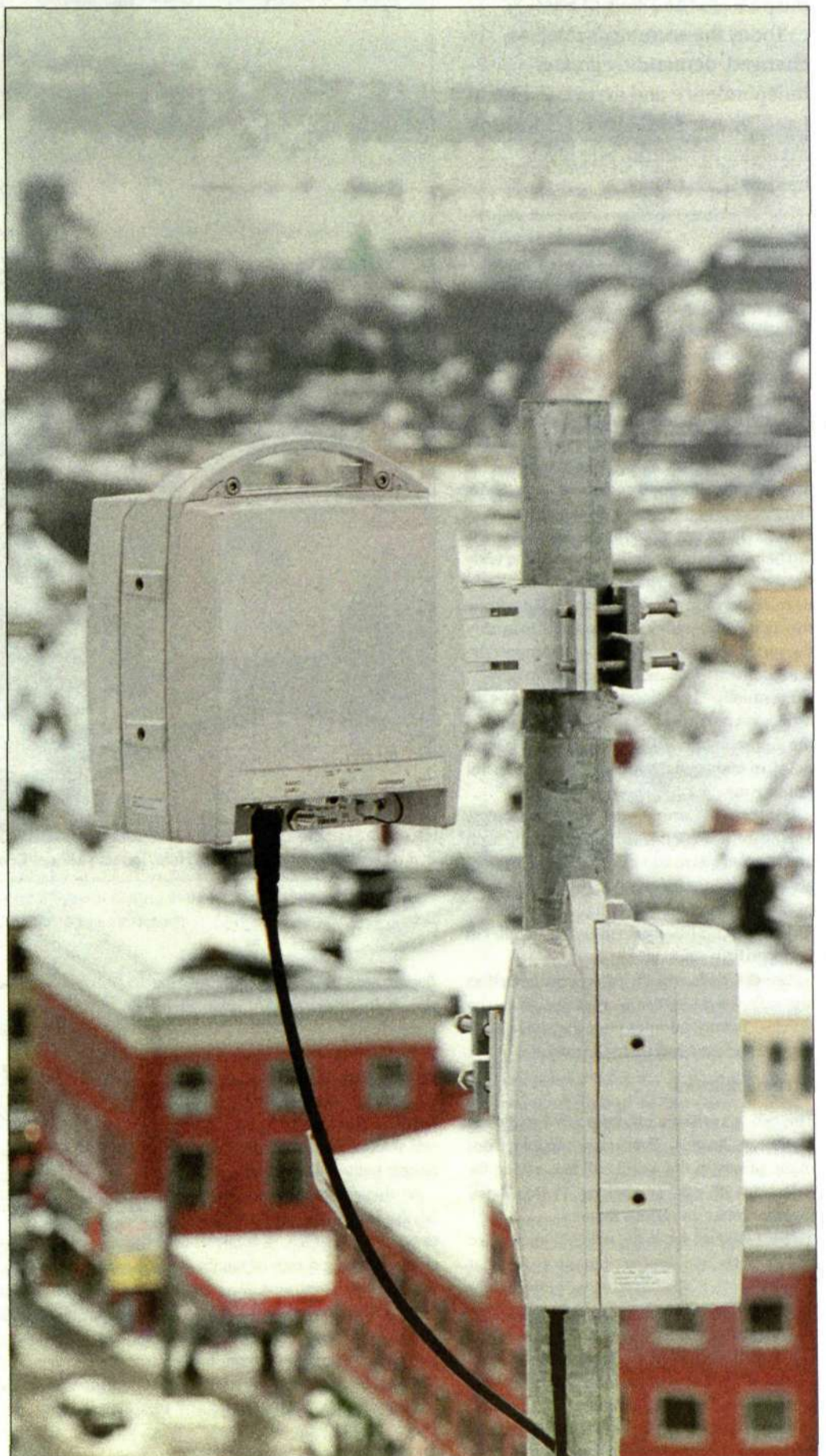
"LMDS is first and foremost a competitive complement to fiber," explains Hans Herbertsson.

LMDS has major advantages in that a connected company can obtain service that is customized to its needs and provides precisely dimensioned capacity for voice, combined with a data service with very high bandwidth.

Hans Herbertsson and his colleagues are now departing on a worldwide roadshow to promote broadband to potential LMDS operators.

Until now, the market has been wavering, but there are signs that it is starting to tip in favor of broadband. More and more operators are beginning to see the potential in being able to offer new services quickly and easily.

Niclas Henningsson
freelance journalist



Wireless broadband in Oslo. Norway's EITele is one of the operators that has purchased Ericsson's MINI-LINK BAS in order to offer broadband services to Norwegian companies. Ericsson's broadband strategy for LMDS is winning supporters in Scandinavia.

An efficient expert with full control

Dictation and typewriting. Is that how we perceive the work of secretaries – like something out of a movie from the 1950s or 60s?

Today the secretary's role has changed, demanding greater independence and expertise. Elvira Landiribar is secretary for Ericsson's manager in Madrid. She loves her job.

► "I have major responsibility as secretary. The people that call me could be key customers, so it's incredibly important to always maintain good relations," says Elvira Landiribar when we meet on the 13th floor of Ericsson's office complex in Madrid.

The photographer and I arrive a little early for the interview. Elvira's colleague Isabel asks us to sit down in the visitor's sofa. We admire the light wood-paneled walls – this is exactly the sort of environment that I would expect the management of a Swedish company to have.

Eventually, Elvira comes out to meet us, in an elegant red dress and with a friendly smile – the perfect image of a Spanish señora. We have only just managed the introductions when her phone rings.

It is Birgit in Germany asking for assistance. The Spanish press has written about Ericsson and Birgit needs to know what the articles were about prior to a meeting. "I promise that I'll have something for you before one o'clock... Alright, 12:30... No, that's no trouble at all, I'm happy to help you out!"

The call ends and Elvira excuses herself as she calls for assistance in tracking down the articles. Twenty minutes later they have been located and are faxed off to Germany.

Various matters

The call is a striking example of what Elvira's work can involve. Every day, people from many places in the world call her, asking for help with things or seeking Elvira's boss, Ingemar Neve, on various matters.

"No two days are alike, which is nice since things never get boring. I'm lucky in that respect. It is a challenge to be prepared for anything," says Elvira Landiribar.

A large part of her job involves handling specific issues that occur. As she describes her job, it becomes apparent that this is one of the reasons why she likes it so much.

"Calls can be from customers who are calling to complain about a phone that they purchased. Frequently, however, they are calling because they want to know more about their phone. I can connect them with the service



Elvira Landiribar's door is open. Here, Ignacio Miquel-Eced, press officer at Ericsson in Spain, receives the latest information from the executive secretary.

Photo: Isabel Arriero

department to ensure that they get the help they need," says Elvira Landiribar.

"Sometimes, once a problem has been solved, I call back to demonstrate my concern and show that Ericsson does much more than simply sell telephones. That there are also people behind the technology."

At this point in our conversation Silvia, from the legal department, enters Elvira's office. It is Silvia's birthday and she is carrying a tray of small, elegant cakes that she offers everyone. We each take one and congratulate her.

"I'm very happy when things like that happen, when someone comes in and wants to include me in celebrations. I work with and am here for the entire company," says Elvira after Silvia has left.

Silvia is not the only person to drop in during the interview. Her open door sends a welcoming signal, and several colleagues poke their head in – a coworker named Angela, a

Sometimes people say they're calling about a 'personal matter.' That type of person thinks the secretary is just a machine

chauffeur named Luis and Elvira's former manager, Raimo Lindgren.

Elvira has worked at Ericsson for a long time – initially in Mexico, where she started fifteen years ago. Ten years ago she applied for and received the job at Ericsson in Madrid. In that time she has become familiar with the company, which is a prerequisite in order to do her job. She has also learned quite a bit about technology, but says that it is not essential to know about all the technical aspects.

"There is an advantage in knowing what the products are all about, however. For the most

part, I just need to know enough so that I can pass along inquiries to the appropriate individuals. That knowledge comes with time and experience. I have, however, also attended classes to become more familiar with terminology."

Prior to working at Ericsson she worked for a number of international companies. She has even spent a few months in Sweden.

"I've always enjoyed companies with varied cultures, and it is important to be familiar with the culture of the company you work for. I have worked for managers from Mexico, Spain, Canada, the US, Norway, Switzerland, Chile, Belgium, England, Finland and Sweden. Interacting with various nationalities has helped me grow as a person," says Elvira Landiribar.

Part of workgroup

The role of the secretary has changed. In the past, she was expected to take messages, type



The job of a secretary is more independent today. Elvira Landiribar deals with a wide range of questions by herself and has several staff members under her supervision.

and take shorthand. Today, the secretarial profession is more independent and she handles an array of issues.

"I make decisions, even if I don't have any illusions about being a big boss. I am actually in charge of some other people."

Elvira's manager is adamant about ensuring that she has insight into what is going on within the company and that Elvira sometimes participates in management meetings.

"Ingemar sees me as a member of the workgroup," says Elvira, who points out that skill requirements for secretaries are higher today in general.

"As a secretary, you must not only have good language skills, but also be sensitive towards other cultures. You have to maintain an overview of what is going on around the world, including the world of finance, telecommunications, stock market and real estate. Even opera, concerts and other activities."

General knowledge is useful in meetings with individuals who come from highly disparate backgrounds. They can include board members, management and important customers, and occasionally even politicians.

There are, however, those who still retain an old-fashioned view of secretaries though Elvira has largely been spared. She has been fortunate to work for sympathetic managers.

Long, hectic days

Elvira's work schedule involves long hours. She arrives at work between nine and nine-fifteen in the morning and often doesn't leave until eight in the evening.

"Working as an assistant to the President of a company means working long hours, as everything moves according to his daily agenda. I am mentally prepared for that, so I enjoy my long days as well," says Elvira.

She starts off by holding a short meeting with Ingemar to go over the day's events. After that, she reviews what needs to be done together with Isabel, and they divide up job responsibilities. Essentially, anything can happen during the course of a day.

"I enjoy it when people call up and ask questions. And I am totally involved in arranging meetings for Ingemar. He has delegated that responsibility to me, telling people to 'call my secretary,'" says Elvira.

The only downside to her work is that it sometimes becomes stressful.

"There can be a lot of pressure, such as when I'm not informed about changes until

*You've got to know what's going on in finance
- but also in opera*



Elvira Landiribar has been with Ericsson for 15 years. During this period, she has got to know the company well, which is an essential qualification for her job.

the last minute. But you get used to it. Sometimes there's an awful lot to do," she says.

Uses psychology to prioritize

Many people call, trying to reach Elvira's boss. It is her job to serve as the go-between. How does she go about prioritizing?

"Through experience. I can hear from the way they pronounce Ingemar's name whether they know him or not," says Elvira.

It's all about psychology - being polite and courteous is essential, according to Landiribar.

"I frequently say, 'he's not available, can I take a message?' It is then that I usually find out they don't really want to talk to Ingemar. Then I connect them to the appropriate person in charge of that particular issue."

"People know Ingemar through the newspapers, which is probably why so many people call asking to speak with him. Something like

40 percent of his calls are not actually for him. I know the people who call him regularly, including when, how and why they are usually calling," says Elvira.

"Sometimes people say they're calling about a 'personal matter.' Those are the kind of people who think the secretary is some sort of machine," says Elvira, her voice revealing what she thinks about that kind of attitude.

"Anyhow a customer, whether internal or external, deserves to be treated with respect and professionalism. Everybody is important."

After we conclude the interview, Elvira arranges for one of the company's chauffeurs to give me a ride back into town. She also says I should call her if I ever return to Madrid and need assistance. That's the kind of person she is.

Henrika Lavonius-Norén
freelance journalist

MY VIEW



Lars-Göran Hedín
lars-goran.hedin@lme.ericsson.se

Invisible assets

"You don't miss the cow before the stall is empty," according to an old Swedish saying. These words of wisdom have not lost their relevance.

► "Just how true this saying is hit me the other day, when the personal assistant of one of the bosses in my department left us to take up other duties. Life at Ericsson suddenly became much more complicated.

I realized how important they are - these people, who are still usually women, who have the job of keeping everything organized around decision-makers at various levels. Their importance can never be underestimated, whether you look at it from Ericsson's own perspective or more generally. And yet I have a feeling that the group of people I'm talking about is fairly anonymous.

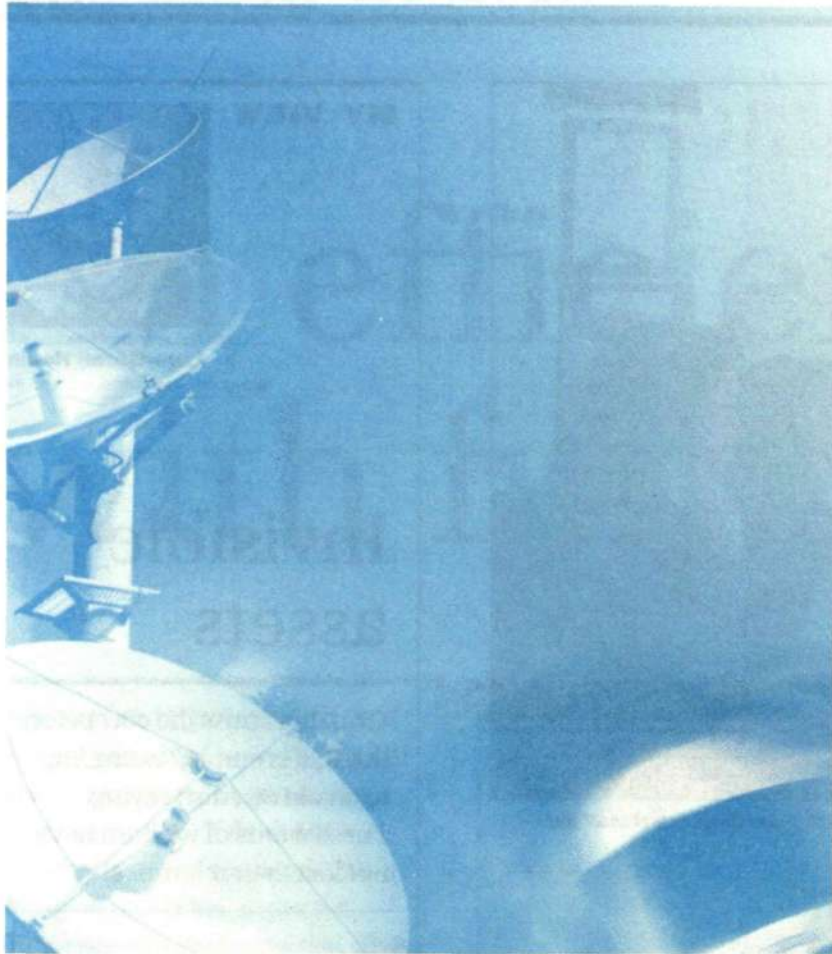
Strange that they are so anonymous: we're talking about some of our most competent, service-minded and, with few exceptions, socially adept colleagues. Off the top of my head, I can name at least 20 extremely pleasant and capable executive secretaries working at Ericsson.

We often speak with admiration and respect about the tough jobs of the individuals in the upper levels of management - particularly those who are in executive positions. Granted, the men and women at the top have demanding jobs. On the other hand, they are often highly paid for the sacrifices required by their job and view their hard work as a way to stake out new territory in their personal careers. But how often do we hear someone talk about how tough it is to be the assistant or secretary to one of these people?

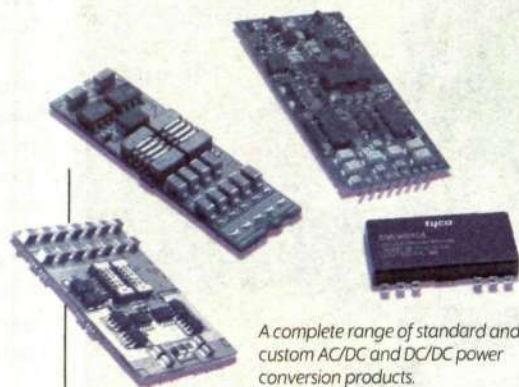
The truth is that if an executive puts in 14-hour days, his or her assistant is often obliged to do the same, at least. And to be honest, she is probably never praised or paid as much as she deserves - though a good executive, I believe, stands or falls on the support he or she requires.

Then of course, there are several positive aspects of a secretary's job. It must be fun, judging from the happy faces I often meet. And of course it's always exciting to be close to the people making the decisions, and to be well-informed in general.

Nevertheless, I would like to urge all executives with a good assistant: Treat her well - you'd be surprised how much she means for your own image, if you don't already know.



for reliable power solutions,
you're accustomed to...



A complete range of standard and custom AC/DC and DC/DC power conversion products.

The power leader in telecommunications and data networking is now called Tyco Electronics Power Systems.

Acquiring this world class business from Lucent Technologies, we can ensure that even the most demanding applications of the future are secure when powered by Tyco Electronics Power Systems.

For further information call:

+46 (0)8 507 250 31

Tyco Electronics Svenska AB
Box 619, Kanalvägen 10C
SE-194 26 Upplands Väsby
Sweden

Website: www.power.tycoelectronics.com

tyco
Electronics

Bringing home the contracts

In early March, some 40 newly hired sales representatives from 22 countries visited Ericsson's head office in Stockholm to learn more about the company.

► The customer account managers are often the ones closest to the customer. It is often their knowledge and enthusiasm that clinch a deal. The "Account Managers Introduction Week," held March 5-9, gave the

divisions an opportunity to introduce themselves to the customer account managers.

Thomas Ulrich has been customer account manager in mobile communications with Ericsson in Austria for one month. He is expecting to conduct many transactions.

"There are currently many operators who want to establish 3G networks in Austria. Several of them are complete novices in the industry, and do not know which suppli-



er they should turn to. This creates opportunities for Ericsson."

Javier Castro, customer account manager with Ericsson in Columbia for the past ten years, agrees and adds:

"If you want to persuade customers that Ericsson is a global company with many years of experience, you must make sure you know that it really is true. And you can only really understand when you have actually traveled around and visited the company's establishments worldwide," he says.

Jenz Nilsson

jenz.nilsson@lme.ericsson.se

ERIC & SON



Torbjörn Nilsson's golden glow

Ericsson's Senior Vice President in charge of corporate marketing, Torbjörn Nilsson, has been appointed "Gold member" of the GSM Roll of Honor.

► The title was established by the GSM Association, a worldwide organization for GSM stakeholders.

Its aim is to recognize people who have made key contributions to the creation, development and continuing success of GSM, the "world's leading mobile system."

Of 100 nominees, only eight people were selected.

The distinction was awarded at a ceremony in connection with the 3 GSM World Congress in Cannes.

"It's of course an honor to have received the distinction, but I feel the prize was not just for me, but also for Ericsson as a company," says Torbjörn Nilsson.



Torbjörn Nilsson

Compression Solutions From Ericsson

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

Features and Benefits

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

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

www.componedex.com

ERICSSON

Ericsson Compondex Limited

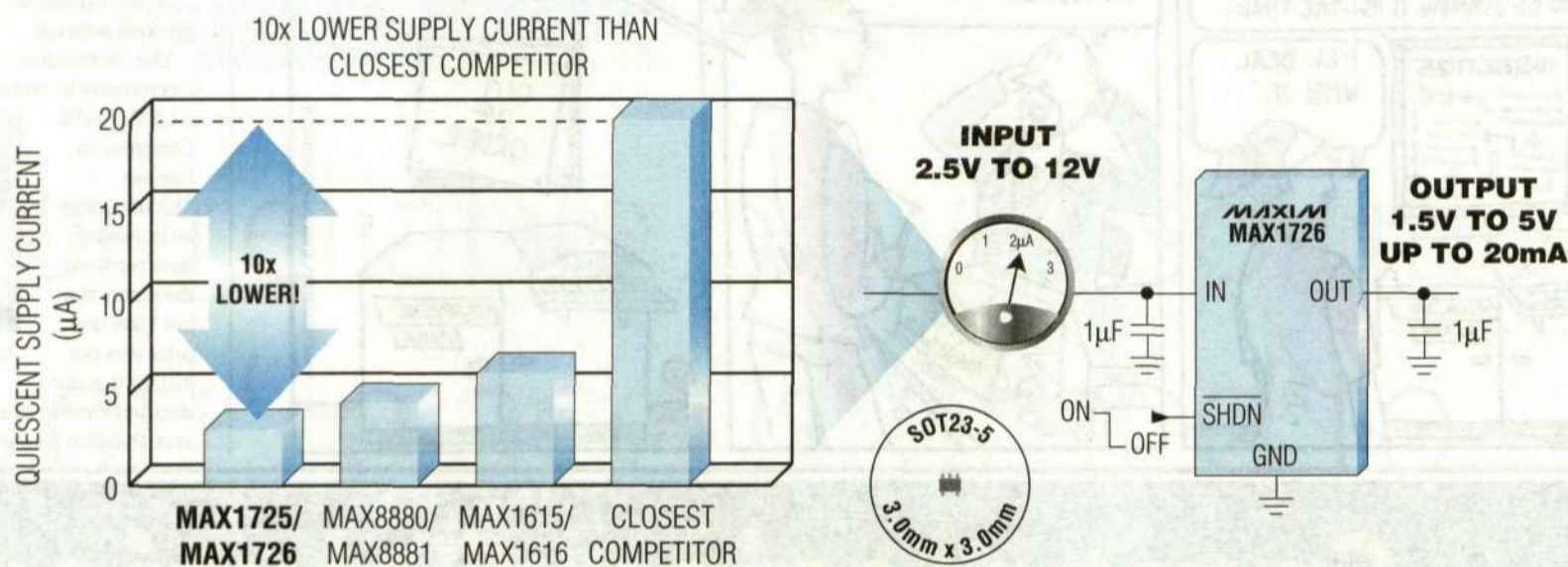
Sherwood Place, 155 Sherwood Drive, Bletchley, Milton Keynes, MK3 6RT, England.

Tel: +44 (0)1908 366522 Fax: +44 (0)1908 366822 web: www.componedex.com

WORLD'S LOWEST POWER LOW-DROPOUT LINEAR REGULATORS OPERATE ON JUST 2 μ A!

Reverse-Battery Protection Eliminates Blocking Diodes in Battery-Powered Apps

The MAX1725/MAX1726 are the industry's lowest power low-dropout linear regulators, intended for low-power applications that require the longest possible battery life, such as smoke detectors and real-time clock (RTC) or CMOS backup power. These SOT23 devices feature an ultra-low 2 μ A supply current and reverse battery protection. Reverse-battery protection circuitry protects the battery, regulator, and load when the battery is connected backwards, while thermal-overload protection and current-limiting offer protection from fault conditions.



- ◆ Ultra-Low 2 μ A Quiescent Supply Current
- ◆ 1%-Accurate Output Voltages
- ◆ 2.5V_{IN} to 12V_{IN} Operation
- ◆ Small 1 μ F Output Capacitors
- ◆ Automatic Reverse-Battery Protection—Eliminates External Blocking Diodes
- ◆ Fixed Output (1.8V, 2.5V, 3.3V or 5V, MAX1726) or Adjustable Output (1.5V to 5.5V, MAX1725)



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 Hatteland; **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.

vacancies

AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation. You can find these and more at: www.ericsson.com/jobs.

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

CONTACT No. 5 2001

Updated March 9

ERICSSON RESEARCH CANADA

An avant-garde group, the Service Creation Point/Wireless Intelligent Network Services (SCP/WIN) function test group is responsible for ensuring the integrity and quality of the Java-based SCP and the WIN service application software in the Jambala Telorb environment. It is progressive because we have successfully automated a significant part of the testing, thus eliminating the tedious parts of performing regression testing and writing test records.

The testing occurs at both the traffic level and the O&M GUI provisioning level. The former is performed via automation through proprietary test programs as well as through 3rd party products in a simulated environment. Our efforts will now start focusing on automating the GUI part in a way to be able to perform integration testing using as much of the automation as possible. After testing these components separately, they are integrated and tested on real hardware with other software before handing it over for system testing.

Integration & Certification Engineer

● Responsibilities: Designing and executing function test cases. Integrating software components together on the platform. Enhancing the proprietary test tool with new capabilities. Troubleshooting the application software. Automating as much as possible. Evaluating and incorporating 3rd party products in the testing process.

The following skills are required or will be developed to perform this job: Java development. Jambala/Telorb experience. Familiar with some of the Rational tools (ClearCase, ROSE, ClearDDTS, TestSuite). IS-41 messages. Troubleshooting. Test Architecture & Design. CORBA scripting. Skills developed in this area will provide some of the skills required to move into other competence areas with greater ease: System Design, Design, System Test, FOA, Maintenance. Come join us as we lead the rest of the organisation to the future of testing. Besides, where else can you get paid to break things!

An avant-garde group, the Jambala Application Platform system design group is responsible for ensuring the integrity and quality of the Jambala platform architecture, and for conducting research activities that will enhance platform capabilities for the future.

System Designer

● The System Designer is a key contributor and focal point of open platform technologies GLOBALLY that will enable Ericsson to be the industry leader for the next generation of infocom/telecom networks. In co-operation with global design units, core units, customers, and research organisations, the system designer conducts applied research activities (pre-studies, prototypes, technical analysis) and provides direction related to the present and next generation wireless networks, open systems, methods and tools. Requirements gathering, platform direction, configuration management, technical investigations, prototyping, presentations, standardisation, characteristics and performance will be key ingredients in maintaining close links to projects, development activities, design organisations, partners and customers in the systems designer everyday activities.

Requirements: At least a Bachelor's Degree, preferably in Engineering, Computer Science or a similar field. At least 5-7 years of experience working in the telecom/computer industry. Business-oriented mindset. Strong communication and presentations skills. Ability to work under stress.

It would be an asset if the candidate also had some of the following qualifications: Distributed applications experience for large-scale systems. Load balancing and load sharing design experience. Datacom Technologies. C++/Java background. UML terminology and process. Internet/Intranet (Web Technology). Large scale Provisioning systems. OO design technology experience. Database Technology. Packet Switching. Transport networks knowledge. Modelling Simulation. Ability to initiate/lead system architectures, re-engineering strategies and software reuse. Able to specify what characteristics are to be verified for optimal use of the system. Self-driven, confident and can lead a team of highly specialised engineers and designers. Telecom background.

Contact: Charles Gelibet@lme.ericsson.se, +1 514 345-7865

OAM Designer

● All development of new and existing applications such as HLRs, Acs, SCP services, etc., will be hosted on the Jambala Platform. The platform consists of 3 major components: the traffic handling is performed by a set of scalable distributed Intel-processors operating with the TelORB operating system; the OAM functionality is performed by a set of Sparc processors connected to the traffic processors; and the SS-7 stack is a Sparc-hosted gateway that allows IS-41 or GSM messages to be processed. You will be respon-

sible for analysing requirements, designing, implementing, and implementation. Design the required functionality (use cases, object model, data model). Code the design using the Java Sun JDK environment. Function-test the implementation. Support system testers for the designed functionality. Provide occasional on-call support (as 3rd line support). Work with the version control tool (Clearcase) to ensure check-in/check-out of implementations. Support technical meetings with other departments and customers. Troubleshooting support. Documentation.

Responsibilities: Analyse assigned requirements for impact and implementation. Design the required functionality (use cases, object model, data model). Code the design using the Java Sun JDK environment. Function-test the implementation. Support system testers for the designed functionality. Provide occasional on-call support (as 3rd line support). Work with the version control tool (Clearcase) to ensure check-in/check-out of implementations. Support technical meetings with other departments and customers. Troubleshooting support. Documentation.

Requirements: Minimum degree in Electrical Engineering, Computer Engineering, Telecommunication Engineering or Computer Science. Telecommunications industry experience. Java in an object-oriented approach. Assets: TCP/IP development. CORBA. Object database design. Distributed processing. Unix operating system development. Rational Rose, Clearcase. Enterprise networking. Exposure as an operator or OAM user.

Contact: Anthony.Tighe-Lafleur@lme.ericsson.se, +1 514 345 7900 x7323.

Product Line Security Engineer

● Responsibilities: Assist in the development and maintenance of internal security policies, standards and procedures. Assist in the development of a standard host-based security model for the JAMBALA platform. Identify all applicable security vulnerabilities and track security advisories. Test and install patches and fixes that address known security vulnerabilities in vendor software. Harden and minimise services provided by JAMBALA systems. Develop configuration management and security baseline configurations focusing on security configuration. Evaluate, implement, configure and customise third-party security tools. Conduct penetration testing, generating reports and metrics. Develop intrusion handling and disaster recovery strategies. Disseminate vulnerability information to various groups. Participate in the change-management process. Conduct system audits using security-auditing tools. Coordinate and scope external audits. Communicate with other JAMBALA and Ericsson groups to establish standard configurations.

Requirements: B.Sc. in Software Engineering with at least three years of experience in Open Systems administration (or equivalent). Knowledge of UNIX operation, administration, troubleshooting, and performance monitoring. Knowledge of UNIX scripting (i.e.: sh, csh, sed, awk, perl). Knowledge of 3PP (i.e.: web servers, DBMS) installation, integration, configuration. Knowledge of TCP/IP network management, naming services, configuration, troubleshooting, and session monitoring. Knowledge of Security software, standards, protocols, and hardening strategies (i.e.: SSH, SSL, Tripwire, TCP Wrapper, tcpdump, TITAN, snort, RADIUS, PGP, IPSec). Experience with developing standard platform configurations. Experience with Solaris, Linux and TelORB operating systems. Experience with user-level logging, kernel-level auditing, intrusion detection, vulnerability testing, and forensics. Experience with SS7 networking and with telephony standards (i.e.: GSM/MAP, TDMA/ANSI-41). Experience with embedded/private networks, web servers, Object-Oriented programming, CORBA, cryptography. Experience with SNMP and commercial network management systems. Experience with firewalls, routers, proxies, and DMZ's would be considered an asset. Strong problem-solving and team-working skills. Ability to travel.

Contact: Algis.Kibirskis@lme.ericsson.se, +1514 345-7900 x5657.

ERICSSON SVERIGE AB, STOCKHOLM

Do You Have What It Takes? Ericsson Sverige AB is Ericsson's sales company in Sweden. Our customers are on the leading edge in tele, data communication and IP. They demand rapid delivery of services, products and solutions within these areas. We also offer advanced business consulting services for Mobile Internet. Our customers are operators as well as private and public organizations in Sweden. Approximately 600 people with strong customer focus work in the company. Our head office is located in Kungsholmen in Stockholm. Are you looking for a challenge and the opportunity to play a crucial role in strengthening our UMTS Core Network Design team?

Data Communications Architects

● We are looking for Data Communications Architects to join our

UMTS Core Network Design department in Sweden. Can you apply your GPRS or Internet Backbone design knowledge to UMTS? If the answer is yes then we would like to hear from you.

MSC/MGW System Architects

● We are looking for MSC/MGW Architects to join our UMTS Core Network Design department in Sweden. Can you apply your extensive GSM NSS systems design knowledge to UMTS? If the answer is yes then we would like to hear from you.

Network Management Specialists

● We are looking for individuals with Network Management System design experience to apply their knowledge to UMTS. Integrating new technologies and achieving effective, cost-efficient network operations are all key network management challenges for UMTS. Can you apply your Design knowledge of Network Management Systems to UMTS multi-service networks? If the answer is yes then we would like to hear from you.

Services & Applications Specialists

● We are looking for Services and Application Specialists to work in our UMTS Core Network Design department in Sweden. Services will be a differentiating factor in UMTS networks. Can you apply your service network architecture knowledge gained in a GSM/GPRS environment to the development of the UMTS IP services domain? If the answer is yes then we would like to hear from you.

Transmission Network Design Architects

● We are looking for experienced Transmission Network Design Architects with extensive planning knowledge of broadband SDH networks. Can you apply your knowledge of Optical SDH Networks to Broadband UMTS networks? If the answer is yes then we would like to hear from you. For more information about the positions have a look at www.ericsson.com/jobs.

Contact: Märten Malmberg +46 70 3762135.

We are supporting Network Management Systems and Datacom IP solutions in the Nordic Countries. The working environment is inspiring with active, dynamic and very competent colleagues. We are working with installation, configuration, implementation, commissioning, test and customer support.

Support Engineer

● Are you interested in exiting and new technology and want to have customer contact, this is the job you are looking for. We expect you have a B.Sc. or equivalent, which makes you able to support technical systems on a high level. If you have competence within especially UNIX (Solaris and HP-UX or SYBASE, SQL, TCP/IP, IP-network configuration, Internet solutions or telecommunication in general, you will soon be able to do tasks on your own. If you like to help others and work in a highly technical level you can be the person we are looking for. It is crucial for yours and our success that you are committed and feel responsible for the tasks you are doing.

You will be working in an international and professional environment. As a member of the Nordic Service Unit, travelling and communication in the Nordic region will be a natural part of the job and will provide opportunities of developing international relations and networks.

Contact: Country Managers: Mikael Adolfsson, +46 8 520 63088 or Anders Nilsson, +46 8 579 18444.

Nordic Service Unit wants you! In January 2000 Finland, Sweden, Denmark and Norway established a common organization for Customer Services, the Nordic Service Unit (NSU). We are approximately 330 employees, and provide the Nordic market with high quality services to Operators. NIC is looking for

Engineers & Technicians

● who want to work in Copenhagen, Stockholm, Grimstad or Jorvas. The Nordic Integration Center, NIC, provides integration services for our customers and is operative in Sweden, Norway, Denmark and Finland. Some of the main challenges we see in the future will be to shift our competence into 3G networks (UMTS).

We are building new competence in aim to give faster response towards our customers and are searching for potential, future professionals to join our team. We are looking for persons who like the challenge of providing services in a world that is constantly

changing. We expect you to have technical education, initiative, speak one Nordic language and have good communication skills in English. We appreciate if you have teamwork and social skills, willingness to develop your competence and customer orientation. If you have test and integration experience it is an advantage. We offer you broad view of products, the possibility to influence your work, international working environment and opportunities to develop your competence.

Contact Integration Manager Søren Damgaard, +45 33 88 39 94, Mobile: +45 20 40 39 94

Are you interested in exiting and new technology and want to have customer contact? Then this is the job you are looking for. We work with installation, configuration, implementation, commissioning, test and customer support in a working environment inspiring with active, dynamic and very competent colleagues. We support Network Management Systems and Datacom IP solutions in the Nordic Countries.

You will be working in an international and professional environment. As a member of the Nordic Service Unit, travelling and communication in the Nordic region will be a natural part of the job and will provide opportunities of developing international relations and networks.

Datacom IP Technicians

● for Stockholm We expect you have a B.Sc. or equivalent, which makes you able to support technical systems on a high level. If you have competence within especially UNIX (Solaris and HP-UX or SYBASE, SQL, TCP/IP, IP-network configuration, Internet solutions or telecommunication in general, you will soon be able to do tasks on your own. If you like to help others and work in a highly technical level you can be the person we are looking for. It is crucial for yours and our success that you are committed and feel responsible for the tasks you are doing.

Contact: Country Managers: Mikael Adolfsson, +46 8 520 63088 or Anders Nilsson, +46 8 579 18444. Positions in Sweden, Norway or Finland: umtsjob@ese.ericsson.se, Ericsson Sverige AB, Att: Louise Lundqvist, Lindhagensg 80, 126 25 Stockholm. Label it Integration. Positions in Denmark: L.M. Ericsson A/S, Sluseholmen 8, DK-1790 København V, Att: Søren Damgaard.

ERICSSON IRELAND, CLONSKEAGH, DUBLIN

GSM is now becoming the Defacto world standard for mobile communications and Ericsson is the leading supplier of GSM infrastructure. In Dublin we are developing part of the Base Station System and are responsible for parts of the GPRS/EDGE systems and Transport/Transmission in BSS. We currently seek applicants to join our exciting Development activities.

GSM SW designer

● You have at least 2 years experience in software development in the Telecommunications industry. Previous experience in GSM is an advantage.

GSM System Designer

● You have at least 5 years experience in Telecommunications development environment. You have previously held a technical responsible role. Previous experience in GSM systems, GPRS and/or telecommunication protocols are an advantage.

GSM Verification Engineers

● You have at least 3 years experience in verification of Telecommunications. Previous experience with BSS, GPRS, protocol simulators and automated test tools is an advantage.

Real Time Routers. Through the introduction of a new breed of real-time routers that have been optimised for use in 3rd Generation Wireless Networks, Ericsson has opened a new ERA of wireless IP. We currently seek applicants to join our exciting Development activities.

Systems Engineers

Verification Engineers

● Candidates will be strong team players and possess a minimum of 2 years expertise in one or more of the following areas: GSM, UMTS, Telecom Platforms, Datacoms, Real Time Routers, IP, ATM, OO, Java, C++, C.

Application: Recruitment.Process@eei.ericsson.se with Ref. GSMDF, Noeleen Waters, Ericsson Systems Expertise Ltd, HR Dept. Radio Hse., Beech Hill, Clonskeagh, Dublin 4, Ireland.

REGIONAL OFFICE WESTERN EUROPE

Solution Design & Pre-Sales Specialist (m/f)

● General: The function is responsible for: delivering defined Solution & Pre-Sales services towards our business partners and their customers where applicable, enabling sales processes to conclude by solution generation and presentation, drive adoption of new technology, by incorporating these technologies into solution- wherever possible initiate and generate new sales leads and opportunities

Job package: On request of the channel- and/or Sales Manager: answer RFQ's and RFI's, including technical and functional description, give presentations about proven and possible solutions, visit channels and customers of the channels, via the intranet: access to a "solution-library", where information about offered solutions can be found. Candidate profile: Preferably a University degree in Engineering complemented by Business Marketing studies, or equivalent min. 3 years of studies. Multi-language capability is a

count Managers and Business Development Managers in this area. Therefore you have to be a sales-oriented individual, enthusiastic and self-motivated, with the maturity to establish credibility with our customers and build the foundation for a successful relationship. Team-orientation and excellent leadership qualities are essential.

Solution Marketing Manager – Internet Applications

● We are looking for persons wanting to play an important role in making Ericsson the market leader in Mobile Internet. Specifically we are looking for candidates in the area of Unified Messaging, Mobile Portals, IN Applications, E-commerce, and Games & Entertainment.

As a solution manager you would be responsible for the product strategy as well as making sure that the strategy is carried through. Included in the job is performance of market- and competitor analyses, finding, developing and supporting the right sales channels. Strategic product marketing belongs to your tasks as well as product introductions and partner relations. You will be the interface toward sales force, design units, technical support, consultancy and integration units.

We expect you to think independently, to possess a high degree of flexibility and a desire to work within the rules of the New Economy. Product management experience from the Enterprise sector could be an advantage as well as web architecture.

Customer Solutions Manager - Mobile Internet

● One of the most dynamic markets in Europe is moving rapidly towards realizing the Mobile Internet, by means of GPRS, WAP and an ever increasing focus on mass market applications and new revenue streams from portals, e-commerce and advertising. Do you want to take on a senior role in grasping this opportunity and help making our key account Vodafone D2 - Mobile operator as well as ISPs - the most successful Mobile Internet player?

We are looking for a dynamic and driving person with a good feeling for the new market place and the Ericsson portfolio of Mobile Internet and Internet Applications. The ideal candidate has a good mixture of Technical and Business competence through education and practical experience.

Customer Solution Manager – Access

● The main responsibility is working for our GSM / UMTS Radio Network Solution towards the Vodafone D2 Group. This includes the definition of solutions meeting customer requirements and to conduct technical presentations. You will be the interface with the customer in issues related and to assume the performance of workshops with the customer.

Applicants will be qualified at degree level and will have built up sufficient technical and business experience to allow them to function independently at a professional level for all activities. The nature of the role is very dynamic, therefore will require pro-active individuals with good problem solving and decision-making skills. Demonstration of communication skills is important as is strong customer and efficiency awareness.

Customer Solution Manager - UMTS terminals

● Do you want to take a senior role in strengthening our efforts in bringing UMTS multimedia client solutions to our key account Vodafone D2? The availability of high-speed data networks, as well as the packet data structure offered by GPRS and W-CDMA, will be a massive leap forward from what is possible over today's mobile networks. To take advantage of these data speeds, users will need a new class of handset, which will be capable of displaying multimedia and other sophisticated content via 3G-based networks.

In this position you will have an important role in making our UMTS project a success and to establish successful business in integrated multimedia solutions. You will be responsible all from the first early trials to paving the way for introducing new and more advanced feature phones and multimedia terminals.

We are looking for a dynamic and driving person, with a good feeling for the mobile internet and consumer market. You have excellent communication skills, work flexibly in a team and have a strong commitment.

Project Manager

● This challenging position involves project management in realization of innovative infrastructure and application solutions for our customers in the segment of network operators and service providers. You will be involved in tender teams, feasibility studies, selection of resources / sub-contractors, contract formulation, set-up of project teams, preparation of project plans and the observation of project milestones and quality assurance.

For this position, the ideal candidate has a degree preferably in electrical engineering and several years experience as a manager of technical projects. You have a strong business focus and are familiar with project management methods and tools. We are looking for a highly motivated and team-orientated candidate who is a good communicator and builds trust in customer relation. You are flexible in finding solutions, see opportunities first and then the limitations. In addition to a good working knowledge of MS-Office applications is a requirement.

Engineers – UMTS Test & Integration

● This challenging job position in the field of the latest mobile communication technology includes a wide variety of tasks, like test, support and integration of new network-elements in 3G mobile and data networks. You are a very important interface towards Project Management, the responsible Market Unit and of course to all customer representatives in Germany. You are responsible for field acceptance tests with the customers, performing trouble re-

port handling and solving HW-, SW- and Configurations-problems. You will be the active interface for the back-office and implement (roll out) new HW- and SW-products. As a suitable candidate you have experience in the area of GSM and telecommunication. You will be trained in the area of UMTS System Technology by attending courses and On-the-job training in our young and highly motivated team.

UMTS Radio Network Design Engineers

● The WCDMA Competence Center at EDD takes central responsibility in the area of third generation mobile telephony systems based on the new UMTS standard. Therefore we are looking for qualified Radio Network Design Engineers in the area of UMTS/WCDMA. You will be part of our new UMTS Radio Network Design organisation which is developing network solutions for our German customers. The position contains the following activities as complete cellplanning of WCDMA Systems, developing methods for WCDMA Radio Network Planning, tuning and optimisation and support of internal and external customers.

As a suitable candidate you have experience in the area of GSM, TDMA and/or IS-95 cell planning. Additionally you need solid knowledge in Unix and telecommunication. You are flexible, a team player, open-minded and self motivated. You will be trained in the area of UMTS System Technology and Cell Planning by attending courses and On-the-job training.

Engineers - Network Configuration

● The network configuration engineer will compile and develop all required data for switching networks (e.g. A- and B-number-analysis, routing analysis, charging/accounting and signalling data). You will also configure new features and services (AOC, IN functionality and features) and work Ericsson internally and at the customer. Further tasks will be preparation of configuration data for hardware expansions and new systems (mobile and fixed networks). Programming of data transcript support system tools and preparation of technical documentation for our customers and service partners are also part of the job.

On top of the above mentioned requirements a suitable candidate should have a good understanding of structures, procedure and functionality of existing telecom nets.

Engineers

System Test Plant (STP) Support and Test Configuration Management (TCM)

● You will be responsible for the configuration and updates of our System Test Plants (STP's). The STP's are used for various projects like Type Acceptance, trouble shooting, test of 3rd party products, or customer demonstrations of new products. As each project requires an individual test configuration, you will cooperate closely with our Project Managers to meet these needs.

Other tasks are planning and supervision of STP extensions (e.g. for UMTS), provisioning of test tools like protocol analysers, and trouble shooting of all STP equipment. You will work with a large variety of equipment, like GSM systems, UMTS, wireline AXE's, IP products like AXD and AXI, Access products, and Test Automation Systems.

The job requires a university degree in Electrical Engineering or Computer Science. You should be interested in both Hardware and Software. Therefore, an apprenticeship as a telecommunication installer or similar is of advantage. Experience in GSM or AXE is also a plus. Depending on your experience, you will do various training courses, as well as a training-on-the-job program.

Engineers – Core Network Mobile

● As a Support and Supply Engineer you will work with Network nodes for UMTS and GSM, e.g. the Media Gateway (AXE or Cello) and the MSC Server. The wide variety of tasks includes the market verification of the new nodes, testing of the latest Software Version and supporting our customer, who is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network as one of the first markets worldwide. Working in the team of the Master Back Office and handling trouble reports is only a brief description of this challenging field of supporting. You will work very closely with the development projects.

As a suitable candidate you have experience in working with Mobile Core products (MSC or UMTS). You are flexible, a team player, open-minded and self motivated. The successful candidate will get a great opportunity for personal and technical development and work with the latest GSM/UMTS technique.

GSM Support Engineer

● Support Engineers, who would like to develop their career in the BSS area are of our interest. You will be responsible for support and supply activities for the radio part of GSM, IP BSS and GSM on the Net. This involves customer acceptance tests, field trials, the first field application, Trouble Report analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development. You will be working with a young and international team in the section 'Radio Access Services'.

Our customer in Germany is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we enjoy 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 to work with the latest GSM technique. We also have our own training center in Düsseldorf.

You should have interest in support/supply activities and working in close contact with our customers. As a team player you will have an active role in support of the existing network and testing of future releases.

Operational Product Managers

(OPM) UMTS / GSM / GSM on the Net

● We are looking for four Operational Product Managers who would like to specialize in the area of Core Network UMTS / GSM or Radio Access Services / UTRAN or GSM on the Net. You will be working with a young and international team in one of the sections 'Core Network Mobile' or 'Radio Access Services'.

As Operative Product Manager you will be market responsible for products within your area from a technical point of view, for the whole lifecycle of the product. You will handle Product/Project support, technical requests for products out in the field which were received from the customer and internal sources, parameter handling of the system, technical interface between the customer and the PU, support of sales activities, handling of product quality issues, handling of customer documentation.

Our customer in Germany is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we have very close contact to the development projects within Ericsson. This will give the successful candidates a great opportunity for personal and technical development and to work with the latest UMTS / GSM technique. We also have our own training center in Düsseldorf. You should have an interest in support/supply activities and working in close contact with our customers. As a team member you will play an active role in supporting the existing network and testing of future releases.

Contact: Ericsson GmbH, Recruitment Service, Fritz-Vomfelde-Straße 26, D-40547 Düsseldorf, career@ericsson.de.

ERICSSON EUROLAB (EED), GERMANY

EED in Herzogenrath/Aachen, Germany, in the heart of western Europe, is a young and growing company with an open working atmosphere and highly motivated colleagues. As part of the Core Network Mobile System operations, EED has the overall responsibility for the MSC/VLR product and the Integration, Verification, Supply & Support of UMTS Core network Mobile Systems. With that responsibility, EED will play a key role in introducing and supporting the 3rd generation mobile systems, UMTS, on the world market. The GPRS Verification and Maintenance department in CNIC is responsible for the General Packet Radio System (GPRS). We verify the packet switching system on network level with real nodes from end to end. With roughly 80 persons we represent a strong datacom unit within Ericsson's verification community. To meet our challenges we plan to enhance the team with motivated persons contributing their datacom background. Therefore we are looking for:

Quality Coordinator (GPRS)

● You take an active role to supervise and drive the activities in our Network Verification and GSN Product Line Maintenance projects from quality point of view. In previous quality assurance activities you have already demonstrated a good quality understanding combined with technical competence. Dealing with datacom systems on non-AXE platforms is familiar to you and considered as your personal challenge.

BSS Trouble Shooter

● For this position we are looking for a skilled trouble-shooter with at least 4 years Ericsson experience. You will be working in the GPRS End-2-end network verification and maintenance activities. As an ideal candidate you have gained in depth expertise in the following areas: excellent system expertise of the BSS system (BSC and BTS), vast experience in locating and solving problem areas, basic understanding of mobile data communication (preferably GPRS).

Verification Engineer Datacom

● For this position we are looking for a skilled technical person with at least 2 years Ericsson experience. You will be working in the GPRS End-2-end network verification and maintenance activities. Your main tasks will be to plan, implement and support network verification activities with an emphasis on data communication. As an ideal candidate you have a good previous experience in either MSC or BSC verification activities, good knowledge of general data communication, experience with test and debugging of software in a Unix environment. Previous experience in TCP/IP, Ethernet, ATM, Frame Relay, DNS, RADIUS, BGP etc. are a definite merit. Based on your personal skills, you can communicate efficiently with internal and external customers. You interest is to fast comprehend new technical areas, improve your competence in the area of mobile data communication and contribute efficiently to your teams success. We offer challenging work tasks on GSM network level, where you will expand your knowledge in mobile data communication, with a strong focus towards UMTS.

TCM GSN

● The Systemhouse Mobile Data Network (MDN) is responsible for the Network Verification of the data traffic in the GPRS network. This task includes handling of all nodes in the network, definition of reference networks, the configuration of all parts of the networks and the verification of the network. We are looking for a TCM GSN. The TCM group is responsible to maintain the complete GPRS network. This includes MSC, BSC, GSN, different backbones like ATM or FrameRelay, the mobiles etc. The Planning of different network configuration and interface function to the units responsible for the single nodes is included in the task. As a GSN responsible, your task is to set up and configure the GSN and to support the network verification test activities. You have a solid background in UNIX (eg. as a system administrator), and good experience data communication. You should be team oriented, have the ability to work under pressure and be supportive.

Tool Engineer GPRS

● For this position we are looking for a skilled engineer with at least 2 years Ericsson experience in verification or tools. You will help the GPRS Verification and Maintenance team with tools development and support. Your main tasks will include: adaptation, extension and trouble shooting verification tools, helping verification engineers with using these verification tools and driving tools improvements both at Ericsson and external suppliers. As an ideal candidate you have gained expertise in the verification of mobile telecom systems, supporting or developing tools for verification activities and already gained first experience in co-ordination or project management tasks. Based on your personal skills, you enjoy communicating with internal customers. You are able to comprehend new technical areas quickly and speak and write English fluently.

You are ready to transfer your knowledge to young, motivated colleagues. We offer challenging work tasks on GSM network level, where you will expand your knowledge in mobile data communication, with a strong focus towards UMTS.

Contact: EED/S/GC, Thomas Busch, +49.2407.575-178, Thomas.Busch@eed.ericsson.se; HR, Markus Helfrich, +49.2407.575-89447, Markus.Helfrich@eed.ericsson.se

The Core Networks Integration and Verification Department (EED/S/T) is mainly responsible for integration, system test and industrialization of the UMTS core network. Additionally we verify new functionality in the GSM MSC on node level. We can therefore offer positions at the very front edge of technology in the field of mobile telecommunications. EED/S/T are looking for candidates to fill the positions of:

GSM SS/UMTS System and Network Testers

● These Testers are mainly responsible for test design and test execution needed to integrate and industrialize mobile telecom/datacom networks of the third generation. This involves node testing on AXE10, CELLO or JAMBALA platforms; network testing in a network containing C7, ATM and IP interfaces; trouble shooting, configuring and tuning the whole UMTS network. The test execution is mainly performed in target environment. As a suitable candidate you have experience in software testing or design, preferably in the area of AXE10 based GSM systems; knowledge of Intelligent Network (platform, services or CAMEL) or charging or C7 Signalling is a significant plus. In the UMTS world testers will need more and more datacom knowledge. So people with experience in TCP/IP or ATM networks UNIX, Windows NT or other platforms; C/C++, Java or other higher programming languages are most welcome. In addition we expect good communication skills, openness, respect, initiative and reliability to work as an effective member in our project teams.

GSM/UMTS System Verification Engineer

for Background Traffic and Load

● Our Load Team has the responsibility for Background and Traffic activities (BAT) for the Industrialization projects (R9/UMTS CN1.0/2.0). We are looking for a new team member as a BAT Test Engineer. In this position you are responsible for the way in which the BAT activities are planned, designed and carried out in accordance with our directives and customer requirements. The aim is to have the solutions that our customers need. Your main activities are: Extract load requirements out of feature documents, Strong participation in planning, implementing and supporting LOAD activities (internal or external), writing of scripts and preparation of traffic mixes for Load generators (MGTSI2000, I3000), Basic Trouble Shooting when testing scripts and mixes in target environment and user support.

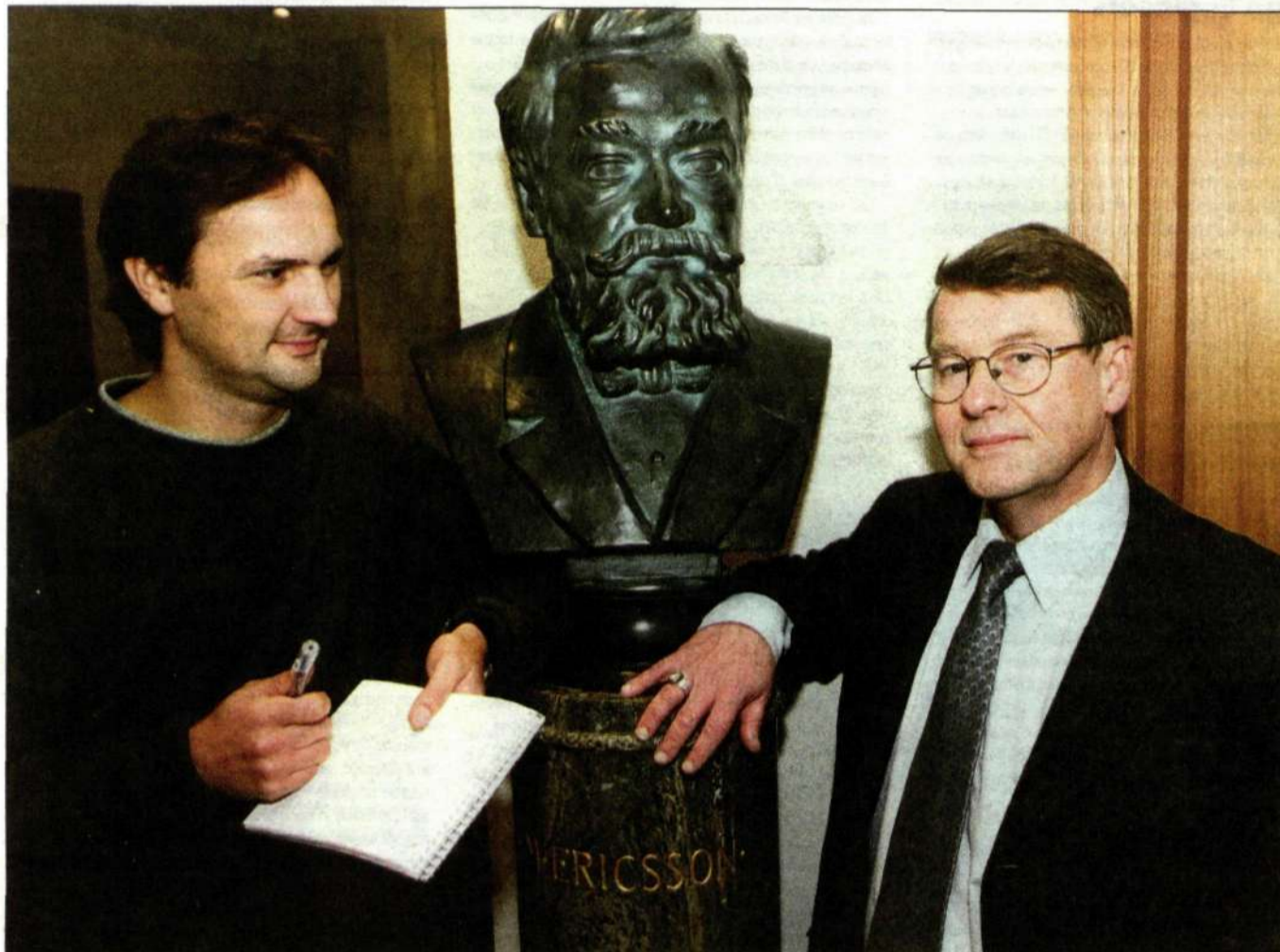
As a suitable candidate you are an Ericsson employee with good AXE-10 experience (2-3 years) and have good test and trouble shooting capabilities. You will need sound knowledge of Load Generators (MGTSI2000/I3000), Data Transcript as well as a knowledge of AUTOSIS and PERL. Experience with testing in a target environment is a clear advantage. A good overview of the UMTS Core Network topology, knowledge about ATM, IGEN, and ALL2/5 is a definite plus.

On your personal side you are open, flexible, and professional, you have a track record of good team working, support orientation and are able to work under time pressure.

Sub-Project Manager UCN 2.0 Integration and Verification Sub-Project

● For our UMTS Core Network Integration and Verification Project UCN 2.0 we are looking for an experienced Sub-Project Manager. Within your team of one Assistant Project Manager and several Test Activity Leaders you will be responsible for prestudy, feasibility study and execution of the UCN 2.0 I&V activities at EED. You will also develop and implement new strategies for testing of networks and co-ordinate your activities with other international verification centers. The main challenge of this project will be the architectural split of the MSC into MSC Server and Cello Media Gateway. As the ideal candidate you have at least three years of experience in leading of AXE 10 projects preferably in the area of test, verification or supply. Good knowledge of Ericsson's processes, PROPS, project planning, budgeting and management methods is necessary. Goal orientation, flexibility, initiative and creativity are elements of your daily way of working. Very good communication, co-operation and leadership skills and the ability to work under pressure are important personal qualities. Travelling is a natural part of the job.

Contact: EED/S/T, Andreas Demmig, +49.2407.575-366, eedade@eed.ericsson.se; HR, Markus Helfrich, +49.2407.575-89447, Markus.Helfrich@eed.ericsson.se



Lars Magnus times three. Ericsson's founder, Lars Magnus Ericsson, is flanked by his namesakes Lars Magnus Eriksson, head of Test Configuration Management for AXE, right, and Contact's Lars-Magnus Kihlström.

Photo: Ecke Küller

His name has a familiar ring

Of Ericsson's 100,000 or so employees, only one bears the same name as its founder, Lars Magnus Ericsson. Our reporter, Lars-Magnus Kihlström, met with him.

Hello Lars Magnus!
"Hello yourself!"

What's it like to work at Ericsson and have the name Lars Magnus Eriksson?
"I like it very much. I've worked on software development for telephone switches for 30 years now, and my work is still just as exciting."

Have there been any benefits to having that name?
"Well, not exactly any direct benefits, although many find it a funny coincidence. It's easy to make yourself known – nobody forgets what my name is when I introduce myself. When I'm overseas, people often find it really interesting – Lars Magnus is even more unusual there after all. In that respect, it's easy to start up a conversation, it's a natural conversation topic."

But don't you ever get tired of all the comments about your name?
"No, actually not. I don't think it's so bad."

You spell Eriksson the wrong way, with a k instead of a c. Any plans to correct that?
"Although that's something I could contemplate doing, I've grown attached to my name. Besides, I feel that I would rather retain a small portion of my identity and not become completely synonymous with old Lars Magnus."

When I first started working here and told people what my name was, one of my colleagues thought I was joking with her and laughed at me. Has that happened to you?
"Well, no, but when we were required to choose ID abbreviations, I asked to be called LME. 'Wait, I'll ask,' replied the person I spoke to. He told me that, 'unfortunately that abbreviation is probably already taken, you'll have to choose another.'"

Most people call me L-M, what do they call you?
"In the past, I was always known as Magnus. It was when we received e-mail addresses that I began using my second name. There were so many people named Magnus Eriks-

son. It's mostly those people who haven't known me for very long who call me Lars Magnus. Lars is an old family name. My father and grandfather were both named Lars, as is my son. His full name is actually Lars Markus."

How did you come to work at Ericsson?

"It was a combination of interests and coincidence. I was interested in computers and software development and had applied for several jobs. The first nibble I got was at Ericsson. Later, I started working on software development for AKE stations – the first programmable switches."

"Now I work with AXE. The fact of the matter is that I did not even know what L.M. stood for before I started working here. I actually had no idea that his name was also Lars Magnus."

What kind of a role do you think your name played in getting you the job?

"It's possible it had some significance, although that would also be rather scary. I hope that it was my skills that helped me land the job."

Lars-Magnus Kihlström
lars-magnus.kihlstrom@lme.ericsson.se

UPCOMING

March 23–28: The world's largest telecom and IT exhibition, CeBIT, takes place in Hanover, Germany.

<http://inside.ericsson.se/cebit01>

www.ericsson.se/cebit

March 28: Ericsson's Annual General Meeting takes place at the Stockholm Globe Arena.

April 3–4: IBC's annual GSM in Northern Africa Conference takes place in Casablanca, Morocco. Ericsson is the main sponsor and will be on hand with a display and speakers during the conference.

UPDATES

March 20–22: CTIA exhibition took place in Las Vegas with about 700 exhibitors.

Issue 1/2001 of the **Ericsson Review** has been published.

www.ericsson.se/review

NEW ASSIGNMENTS

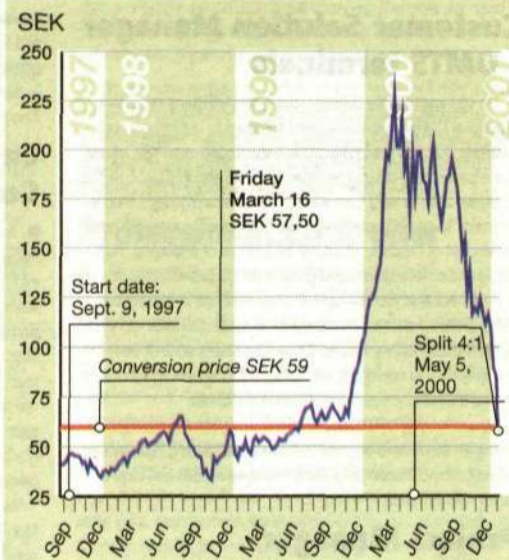
Jan Embro has been named head of Ericsson in South Africa. He will assume that post on April 1, succeeding **Christer Hohenthal**, who will continue to work at the company as a Senior Advisor. Christer Hohenthal will also continue to serve on the board of directors of Ericsson South Africa (Pty) Ltd, with a focus on business development.

Carl-Henrik Folstad has been named head of Ericsson in El Salvador.

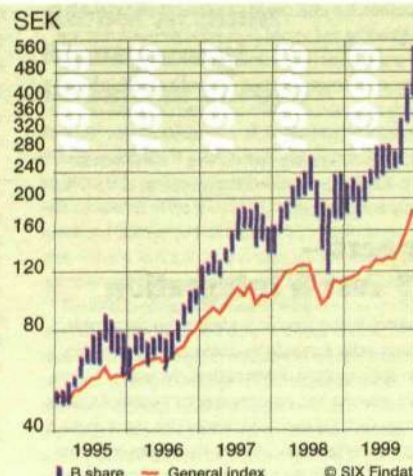
Elisabet Järstrand has been named public relations manager at Ericsson Microelectronics. She succeeds **Bengt Callmer**, who is leaving Ericsson on April 1.

Philip Rambech has been named head of Ericsson Consumer Products Asia Pacific Pte Ltd.

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>



■ B share — General index © SIX Findata