Senior and author

Christoffer Andersson is 27 years old, but he is already senior specialist and author of the book GPRS and 3G Wireless Applications – the Ultimate Guide to Mobile Internet. 11

An expansive hot-spot

Telecom Corridor is the name of one of the most expansive hi-tech areas in the world. It is located just north of Dallas, USA and 70,000 people work here. Ericsson's new head-quarter lies in the frontline of the Telecom Corridor. 14

Positioning on the phone

Soon nobody will be able to hide – at least not if they have a mobile phone with them. The new positioning services for mobile telephony open up possibilities for an extensive location-based information service. 15

contact

51.00
Ericsson B share, Stockholm 31/8
Last *Contact* 51.00

■ NO. 14 · SEPTEMBER 6 2001

Sony Ericsson ready to take off

Now the details of Sony's and Ericsson's joint venture have been settled. After a final approval by regulators and the boards, the company will start operations on October 1.

– Everything has been worked out: business plans, designs and product lines. We are ready to generate profit from day one, says Jan Wäreby, who will be executive vice president of the new, London-based, company. **News, 5**

Ericsson scores a Hat trick

Ericsson has won three GSM contracts in Nigeria. All three operators that received licenses earlier this year, have chosen Ericsson as sole or major supplier.

Roland Guillou, president of Ericsson in Nigeria, anticipates a great future for mobile telephony in the country.

"Everybody is waiting to subscribe", says Roland Guillou. **News, 7**

Behind the lense at 5minutes

Heavy cameras, powerful lights and questions that straighten out the issues. Many hours of work go into each minute of Ericsson's internal television program, 5minutes.

Contact finds out how a program is put together and explains why not everyone can see the show. Some employees also get the opportunity to say what they think about 5minutes. **12–13**

The reporter Lars-Magnus Kihlström and the cameraman Graeme McBride angle their story. Photo: Ecke Küller

Veteran gets tough

Photo: Ecke Küller

Per-Arne Sandström was recently appointed Chief Operating Officer at Ericsson.

He will be working closely with President and CEO Kurt Hellström, and together they will share responsibility for the company's undertakings.

Colleagues describe Per-Arne Sandström as a fearless visionary. **3**

New leaders share their plan

The reorganization of Ericsson has also affected management. *Contact* met up with two gentlemen who have important roles in the new structure. Einar Lindquist and Johan Bergendahl are newly appointed heads of Business Units Mobile Systems WCDMA and GSM, and Multi-Service Networks and Data Backbone. **News, 6**

■ WORLD WATCH

GPRS is now being rolled out worldwide. The new technology enables a large number of new services for customers and higher data transfer speeds via mobile phones. This represents an important step towards the Mobile Internet. Now it is up to operators to earn money using the new systems, but this may require new approaches to tariffs. **8–9**

The T68 GPRS phone.

■ FEATURE

The story behind Engine, the solution that saved Ericsson's division for fixed networks, is one full of enthusiasm and vision, but also of scepticism, frustration and heated debates. **16–17**

■ TECHNOLOGY

When Ericsson took over Qualcomm's infrastructure operations in 1999, the selection of mobile systems that the company could offer customers was expanded to include CDMA solutions.

This mobile standard is now rapidly advancing towards the third generation and the Mobile Internet.

The latest version of CDMA2000, 1xEV-DO, is optimized for data and also offers wireless technology for local networks, WLAN.

TEMS™ *Making Wireless Better*

Task: Planning and optimizing wireless networks.
Solution: The TEMS portfolio. From 2G to 3G.

If you need to plan and optimize 2G or 3G networks, use the TEMS portfolio from Ericsson.

Operators around the world utilize our portfolio, for every aspect of network optimization – from initial design and performance testing to upgrades and expansion planning.

We're constantly improving our products to make sure they address the challenges wireless operators have to face.

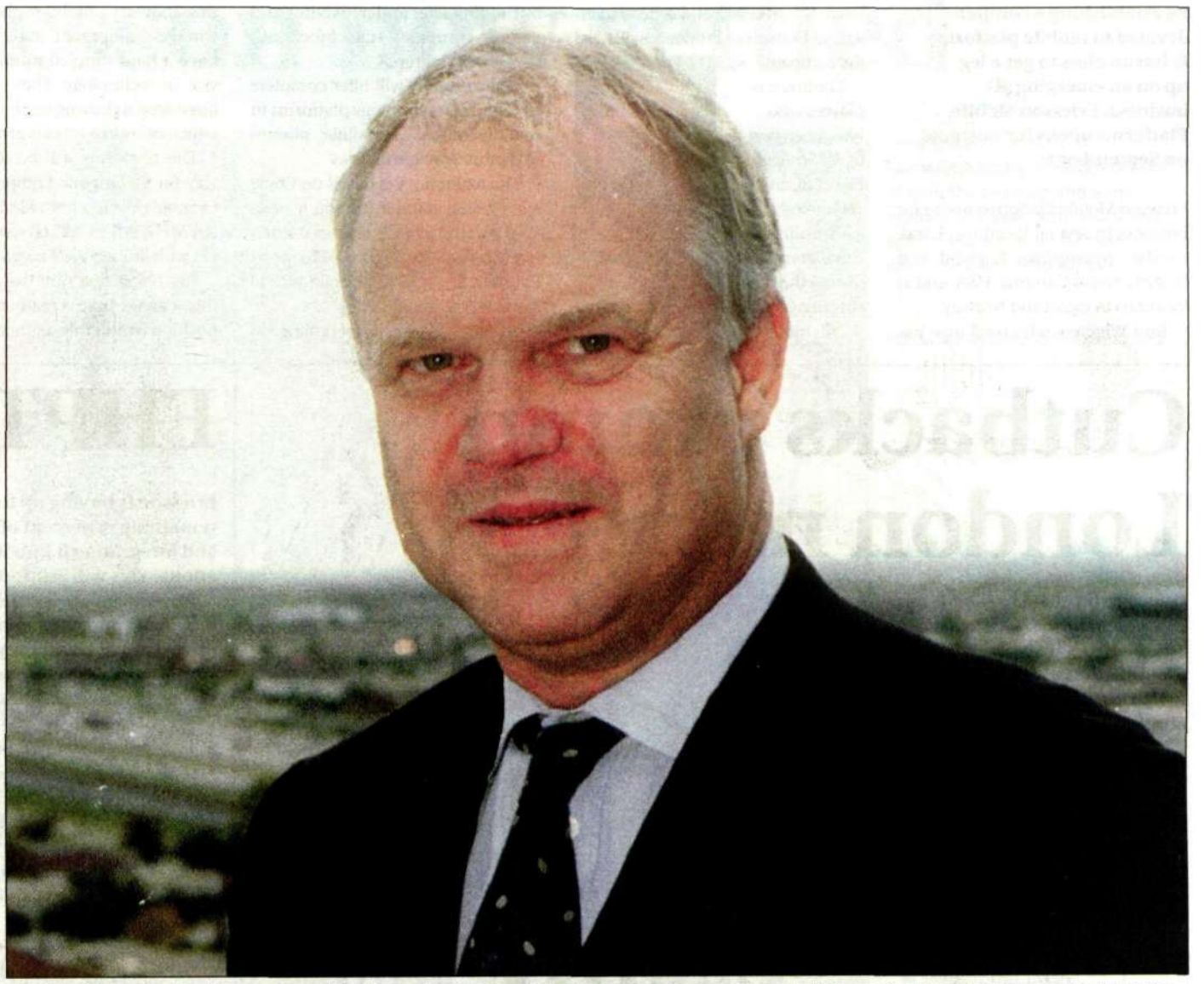
Delivering tools to grow with, from 2G to 3G, we're helping make Mobile Internet a reality.

www.ericsson.com/tems • Intranet: tems.ericsson.se

ERICSSON

Fearless visionary at helm

Ericsson's recently appointed Chief Operating Officer is no newcomer. During his 13 years at Ericsson, Per-Arne Sandström has compiled a broad base of knowledge about the company. He has served as the head of several different units and market areas. Now he is looking forward to the challenges that await in his new position.



Per-Arne Sandström has been named Chief Operating Officer at Ericsson. His colleagues describe him as a fearless visionary, and he is looking forward to the challenges that await him. Photo: Ecke Küller

➤ Per-Arne Sandström is in Stockholm in conjunction with the public announcement of the reorganization of Ericsson. He exudes self-confidence and a desire to get started with his new duties. His new position as Chief Operating Officer (COO) means that he will be working closely with President and CEO Kurt Hellström. From now on, they will share responsibility for the company's business undertakings. Per-Arne Sandström makes it clear, however, who has the final say.

"Kurt Hellström is the head of Ericsson, end of story. I will become his right-hand man and be responsible for operational aspects, although employees should not view me solely as the person in charge of internal issues. Since I am also head of the new business units, I'll be involved in quite a bit of marketing work and contacts with customers."

Natural division

He feels that the division of duties between himself and Kurt Hellström is a natural move and that its timing is right from the company's viewpoint.

"The division will allow Kurt to devote more time to his role as Chief Executive Officer. Moreover, he will be able to focus on the market units. Considering the difficulties that the telecom industry has experienced recently, it is necessary for a company of Ericsson's size to streamline its management," says Per-Arne Sandström.

"There are many examples of successful US companies that have appointed a chief operating officer just like Ericsson is doing now. The same is also true in the UK."

Used to pressure

Per-Arne Sandström likes talking about the US. For the past 18 months, he has been in charge of Ericsson in the US, in addition to heading the North American market area, where the economic downturn was first felt. He has been described by the Swedish media as tough and fearless, no stranger to pressure.

"I'm not afraid of implementing unpopular changes and I think that such measures might be needed in the future," he says.

Per-Arne Sandström believes that the experience he has gained during his thirteen years with Ericsson will be his most useful asset in his new position.

"I have experience of almost all of the products that Ericsson currently offers, especially within the wireless area. While I was head of Airborne Radar Systems in Gothenburg, I learned quite a bit about managing state-of-the-art development work and how to design and produce complex systems," he says.

Diplomatic

During the latter part of the 1990s, Per-Arne Sandström was in charge of the GSM Systems business unit. One person who worked closely with him at that time was Kurt Sillén, currently marketing manager for GSM.

"Per-Arne is a very diplomatic person who listens to people. Moreover, he is a visionary. When we started working together, I devoted quite a bit of time to developing e-commerce. Per-Arne was encouraging and realized before many others the enormous potential of e-commerce," says Kurt Sillén.

Major challenges now await Per-Arne Sandström and his management team, which consists of representatives from the various business and core units.

Towards the same goal

"A number of important decisions have to be made, including fundamental issues such as how to conduct daily operations within my area of responsibility," says Per-Arne Sandström.

"A mixture of former divisions and product units have wound up on my plate. Now I have to assemble my management team and make sure that we're all working towards the same goal, namely to quickly restore profitability on the systems side."

Jenz Nilsson
jenz.nilsson@lme.ericsson.se

FACTS/PER-ARNE SANDSTRÖM'S CAREER AT ERICSSON

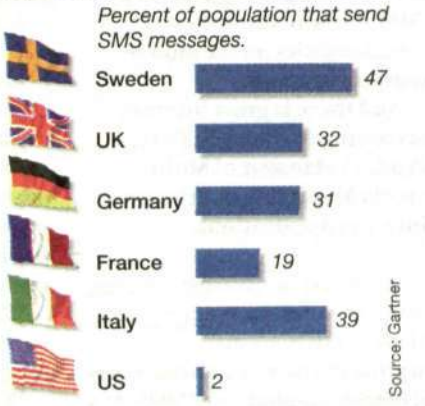
1988: Leaves Telia for Ericsson
1990: Head of Airborne Radar Systems division in Gothenburg
1993: Marketing manager at Ericsson Radio Systems Western Europe
1998: Head of Ericsson's mobile systems operations in the UK
1999: Head of business unit GSM Systems
2000: Head of North American market area and of Ericsson in the US
2001: Becomes Chief Operating Officer of Ericsson

5 inside.ericsson.se/5minutes➤archive➤shows➤August 21

DID YOU KNOW THAT...

...almost half of all Swedes send SMS.

Percent of population that send SMS messages.



contact

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

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

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

EDITORIAL STAFF
Lars Cederquist, +46 8-719 32 05
lars.cederquist@lme.ericsson.se
Elin Dunås, +46 8-719 06 21
elin.dunas@lme.ericsson.se
Lars-Magnus Kihlström, +46 8-719 41 09
lars-magnus.kihlström@lme.ericsson.se
Tonya Lilburn, +46 8-719 32 02
tonya.lilburn@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

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

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

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

PRINTED AT
Nerikes Allehanda Tryck, Örebro, 2001

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

CONTACT ON THE WEB:
http://www.ericsson.se/SE/kon_con/contact

New 3G platform company

By establishing a company devoted to mobile platforms, Ericsson aims to get a leg up on an emerging 3G business. Ericsson Mobile Platforms opens for business on September 1.

Ericsson Mobile Platforms opens for business in several locations: Lund, Sweden; Basingstoke, England; and Raleigh, North Carolina, USA, and at locations in Japan and Norway.

Tord Wingren, who until now has been vice president and general manager at Consumer Products, will head the company.

Tord Wingren

The 800 employees who have been part of the Strategic Planning and Technology Unit at Consumer Products will go over to the new company.

"It's more or less of an intact unit, but adding sales and marketing, and adding company staff functions", says Tord Wingren.

The company will offer complete 2.5G and 3G technology platforms to manufacturers of mobile phones and other wireless devices.

The technology is based on Ericsson's global standardization leadership and the world's strongest Intellectual Property Rights (IPR) portfolio for 2.5 and 3G mobile phone systems.

"We foresee a structural change in the industry. Mobile phone and wireless equipment manufacturers have a hard time continuing to invest in technology. They're instead interested in buying open solutions, which of course we can provide".

The platforms will be the fastest way for an Original Equipment and Original Development Manufacturer (OEM/ODM) to launch a new product with limited R&D investments.

"By being first out, we can drive this change and create a leading position within this segment".

While other parts of Consumer Products go over to the Sony Ericsson joint venture, the Strategic Planning and Technology Unit becomes its own company, with Sony Ericsson Mobile Communications as a major customer.

"We will comply with their requests and demands, and then our goal is to sell platforms to the open market".

Dodi Axelson
dodi.axelson@qlm.ericsson.se

Cutbacks prompt London move

Due to cutbacks, Ericsson is moving its London office from St. James' Square to 105 Wigmore Street. The new office is centrally located, somewhat smaller and the rent is considerably less expensive.

The decision to move is in line with the Efficiency Program and was made following a reduction in the number of London employees from 100 to 70 people. Corporate functions based in London – finance, information, HR, marketing, sales and investor relations – will be relocated into the new offices.

The decision to sell off all properties in order to free up more capital for business operations remains in place. The relocation will occur at the end of 2001.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

The move from St. James' Square will occur at the end of the year.

EHPT acquired

Ericsson is buying up the remaining 19 percent of EHPT and integrating it into its operations. This will reinforce the company's position within business support systems and invoicing solutions for payment over the Internet and in 3G networks.

A new unit known as Mediation, Activation and Interconnect is being formed within the Internet Applications core unit. The IP/Jalda unit will also be part of Internet Applications. Lars Boman, head of Internet Applications, believes that this is a positive solution:

"Now we'll be able to concentrate on developing and refining these products and solutions and ensure that our customers have the best solutions in the future as well. If our customers notice any difference from before, it will be for the better".

The Business Intelligence portion of EHPT will end up within the Multi-Service Networks and Data Backbone business unit. The unit will be integrated with the ATM Multiservice product unit, headed by Ragnar Erkander.

"We had already initiated negotiations that included a supplier contract for an EHPT product known as Analyzer. Now this will become our own product, so we're very pleased to be taking over this operation".

A new company is being formed to oversee invoicing solutions and will be organized under the Global Services business unit.

Mikael Bäckström will head up that unit. Hewlett-Packard and Ericsson will continue to collaborate closely in the future.

Dodi Axelson

Ulrika Nybäck

Engine to help clients see in the dark

The Multi-Service Networks division is launching a new Internet site as part of its effort to market Engine. At the same time, a new, leaner advertising campaign will be rolled out. One of the tactics involves key customers receiving night vision glasses.

For the first time, a campaign message revolving around Engine's risk management theme will be visible on the division's external portals.

Based on the Mobile Internet campaign, marketing managers concluded that people visited Ericsson's website but that they did not stay very long.

"We want to lead our key groups to the Engine website. Our primary goal is to get our core message out by making it interactive", says Maggie Curran, of Multi-Service Networks, who is overseeing the campaign.

Advertisements will show photos of workers who are taking risks in their jobs. Each theme is tied in with Engine's applications or services.

According to Maggie Curran, the highlight of the website will be the new weekly program, "What's Next Magazine Broadband TV", and "Scenarios", a multimedia version of the futuristic book by the same name, which was sponsored by the division. The site will be launched one week prior to the start of the campaign. Operating with just one sixth of its original budget, Multi-Service Networks will be placing advertisements in trade publications, as well as conducting a direct marketing campaign. Managers at key customers will receive night vision glasses with the message: "Be prepared, make sure you can see in the dark".

Dodi Axelson

Operators testing MMS

Starting in September, Ericsson's customers will be able to test Multimedia Messaging (MMS), one of the hottest functionalities on the mobile market right now.

And there is great interest, according to Nancy Raftery, Product Manager of Multimedia Messaging at Ericsson Internet Applications.

"The market is showing amazing enthusiasm for the future of MMS. Many of Ericsson's market units are in active discussions with customers about the introduction of MMS. As a result, an MMS trial is viewed as an immediate step to be taken", says Nancy Raftery.

A typical trial period lasts for 90 days. Operators can experience the benefits of MMS using a limited number of pre-commercial MMS capable phones, the Ericsson T68.

Ericsson Internet Applications offers remote technical support and professional services to help operators build a business case for a commercial launch of MMS.

"This way, we are showing that the product is real, and working", Nancy Raftery says.

"If a picture is worth a thousand words, a trial is worth a million. Each trial customer is a strong potential for a commercial sale. I receive compliments on this trial strategy each day".

MMS Trial systems are being installed within Ericsson demo and lab facilities, such as the Mobile Internet Studio in Kista and the GPRS Demo Center in Madrid.

The first customer trial will start in the beginning of September with Italian operator TIM.

Elin Dunås
elin.dunas@lme.ericsson.se

Ericsson reaches 3G semi-final in Japan

Ericsson is now just one step away from the final of the 3G race in Japan. In August, the customer, Japan's leading mobile operator NTT DoCoMo, approved the Quality Assurance Test (QAT) that was conducted on Ericsson's radio base stations.

This means that Ericsson is included in the field tests now being performed, which will verify that the base stations also function well throughout the system and in combination with terminals.

If the outcome of the field tests is also successful, Ericsson will be involved in the world's first 3G network, which NTT DoCoMo plans to launch at the beginning of October. In this case, Ericsson will provide its Wideband Base Transceiver Stations (WBTS) for the network, on which the company is collaborating with the Japanese suppliers NEC, Fujitsu and Matsushita. This would be a major success for Ericsson's engineers, who have been working on this extremely complex product since 1998.

Lars Cederquist
lars.cederquist@lme.ericsson.se

Joint venture between Sony and Ericsson now settled

The union between Ericsson and Sony has now been settled. The first products from the new joint venture will be released during next year. However, the brand name is yet to be unveiled.

Jan Wäreby

"When the joint venture starts on October 1, we will carry both Ericsson and Sony products. We also have a clear plan for the line up, and the first products from the joint venture will be launched during next year", says Jan Wäreby, head of the Consumer Product Division who will be executive vice president of Sony Ericsson Mobile Communications.

This means that for example the T68 model, which is scheduled for the end of this year, will be marketed as an Ericsson product, but sold by Sony Ericsson's sales organization.

The T68 will have GPRS and color-screen.

Brand release in October

The brand name and logotype for the new products will be revealed after October 1.

"But what I can say is that both Ericsson and Sony are strong brands. So the new brand will have strong ties to both these names in order to use the power of the brands."

The plans for a joint venture were announced in April. Since then, a lot of work has been done. The organizational structure is now settled, business plans, product lines and designs are worked out. Now, all that remains is formal approval from regulators such as the EU antitrust commission as well as the Ericsson and Sony Boards of Directors respectively. In a couple of weeks, when this has been accomplished, the management of the new company will be announced.

The joint venture will have around 3,500 employees, of which about 2,500 come from Ericsson. To bridge differences and to build up a strong company spirit, a culture awareness program has been introduced.

"We are surveying the different units within the company and the result will be the base of a formal program. But there are also many local initiatives going on. For example learning more about the Japanese or Swedish culture or about the other company and its products and so on. But I must say, I have worked all summer with the Sony team, and the differences are really very small", says Jan Wäreby.

Sony Ericsson Mobile Communications will sell products of both the Ericsson and Sony brands. The new, common, brand will be revealed after October 1 when the joint venture takes off.

Photo: Bertil Ericson/Pressens Bild

Four main sites

The headquarters of the new company will be in London and there will be four main sites: Ericsson's in Lund, Kista and Raleigh and Sony's in Munich and Tokyo.

The responsibility for the sites will very much be distributed according to their geographical position. This means that Raleigh will have the main responsibility for the American standards, such as TDMA and CDMA, the Tokyo site will concentrate on the Japanese market, and the European sites will mainly deal with GSM and WCDMA terminals.

Several products scheduled

"What is most important now is to get ready for October 1 and to continue to sell and develop products even before that date. We have a number of products that are scheduled for launch and we have to sell our products also in September. We cannot wait for the joint venture to start", says Jan Wäreby.

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

Sony chronicles published

Recently, the book of Sony was released.

"Sony. The private life" tells the story of how the founders took the company from nothing to today's giant corporation with an annual turnover of USD 50 billion.

It took engineer Masaru Ibuka and entrepreneur Akio Morita 40 years to build up Sony to what it is today.

It all started in October 1945 when Japan was in an economic crisis after the war. Masaru Ibuka moved to Tokyo and started his first project – to manufacture rice-boilers.

The enterprise was a total failure.

However, after the first slip things went better, and today the list of innovations and best-sellers is long.

In 1955, Sony introduced the first transistor radio receiver, and some years later the first transistor TV-set.

The company also made the Betamax home video recorder and, of course, the portable cassette player, Walkman.

The name Sony is a composition of the Latin word for sound, "sonus" , and the English word "sonny-boy".

"Sony. The private life" is written by John Nathan and published by Houghton Mifflin.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

Ericsson retakes third place in market league

A new report from the Gartner analyst firm shows that Ericsson's market share has increased by two percent: from 6.8 percent to 8.3 in just one quarter.

Nokia retains the lead by 20 percentage points, with 34.8 percent of market share. Second-place Motorola has 14.8.

"This confirms our own figures – that we have recaptured the third place of sales in the second quarter ," says Nina Eldh, Media Relations director at Consumer Products.

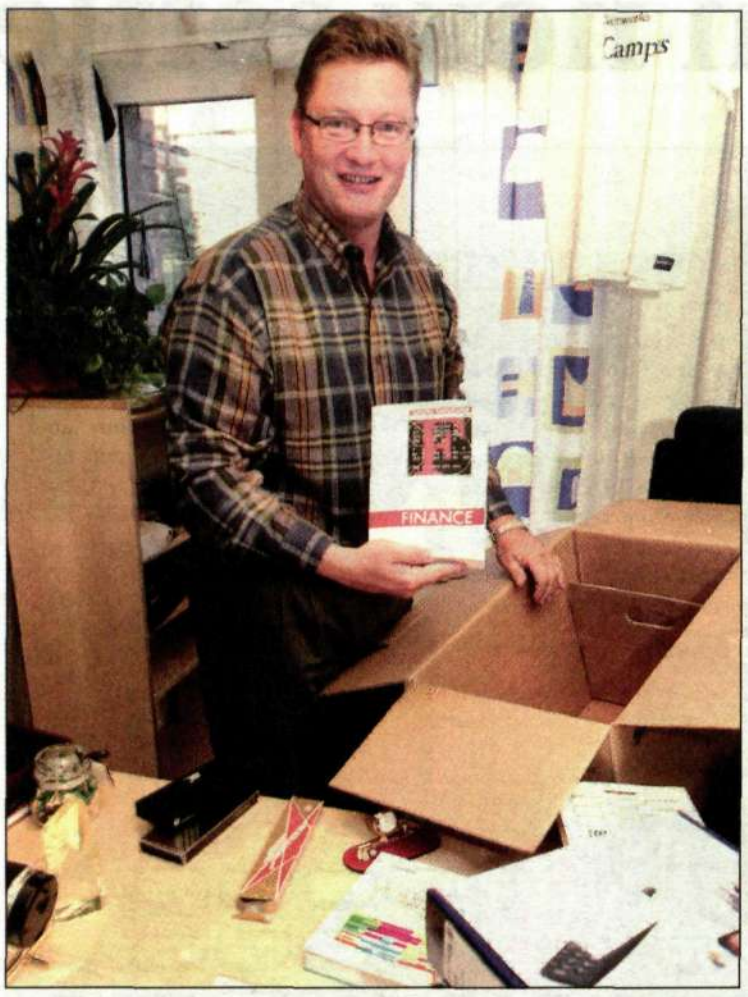
Sony and Ericsson's joint venture will automatically have ten percent of the market. Gartner analyst Ben Wood tells the Swedish newspaper Finanstidningen, "Ericsson has a jump start with Sony, but the new joint venture won't be able to relax for a second. In this market, it's extremely impressive to hold third place for a long time, so if they can stay there and show profitablity, that's an accomplishment in itself".

Lars-Magnus Kihlström

Important tasks await Lindquist

Einar Lindquist is enthusiastic about his new role as Executive Vice President of Ericsson's largest business unit, Mobile Systems WCDMA and GSM. He is also respectful of the challenge he is being given.

"We're a global market leader in both GSM and 3G, and we intend to remain so," he says.



"I've had three fantastic years with the Multi-Service Networks division. Now, as I leave, I'm smiling with one eye and crying with the other," says Einar Lindquist, who will be the new Executive Vice President of Ericsson's Mobile Systems WCDMA and GSM business unit as of September 1.

Photo: Ecke Küller

Einar Lindquist formally takes charge of the WCDMA and GSM business unit on September 1.

Practically speaking, however, he has already made the switch. Now it is important to quickly immerse himself in the new job so as not to lose momentum.

"I have respect for people who say, 'oh no, not another reorganization,' but it's important that we do not lose focus now. For my part, I have to ensure that we maintain our positions, while simultaneously earning more money. It will be a major challenge," says Einar Lindquist.

Ericsson's current Mobile Systems division is the part of Ericsson that has been most strongly affected by cutbacks, so one of the important tasks facing Einar Lindquist will be to motivate employees to renew their efforts.

"You can't motivate people without letting them know where we're headed. What I'm planning to do is make sure everyone understands what we hope to achieve and how we will accomplish it. Once people have decided to become involved, I'll provide them with my full support."

When he was named head of Multi-Service Networks in 1998, the division was at a low point, both in terms of business and employee morale.

Today, the division's Engine concept is one of the prides of Ericsson.

"What I bring with me from that period is experience of a leadership style that put a premium on involvement and communication. However, I do not believe that you can simply duplicate the elements of previous successes. You need to look at every situation anew," says Einar Lindquist.

Although the new business unit is named WCDMA and GSM, Einar Lindquist will also be responsible for the TDMA, PDC and Edge systems.

"The name of the unit is an internal one and does not mean that the other systems are unimportant. When dealing with customers we'll still be known as Ericsson. We're now focusing on migrating from 2G to 3G in an efficient manner."

It is with mixed emotions that he leaves his old job.

"I've had three fantastic years with the Multi-Service Networks division. Now, as I leave, I'm smiling with one eye and crying with the other. At the same time, I know that operations have been left in good hands now that Johan Bergendahl is taking over," says Einar Lindquist.

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

FACTS/EINAR LINDQUIST

Einar Lindquist, born 1959, holds an engineering degree and began working for Ericsson in 1989 as a sales and marketing manager of NMT base stations.

Since then, he has held several positions including head of Ericsson in Hungary and head of the Private Radio Systems business unit in the US. In 1998, he was named Executive Vice President of the Multi-Service Networks division.

Effective September 1, he will become Executive Vice President of the new Mobile Systems WCDMA and GSM business unit.

Bergendahl has clear goals

Johan Bergendahl, Executive Vice President of the Multi-Service Networks and Data Backbone business unit, has three main goals for the coming year.

"We need to retain or increase profitability. Development of Engine must continue and eventually become entirely based on Internet Protocol. A third important goal is to clarify Ericsson's strategy regarding broadband solutions."

During the second quarter of this year, Ericsson decided to merge its Multi-Service Networks and Data Backbone & Optical Networks divisions.

Now, with Ericsson's restructuring, the combined divisions will form a new business unit instead. Johan Bergendahl sees many advantages with the new organization.

"The Multi-Service Networks division consisted of three business units and Data Backbone and Optical Networks of four product units, each of which had communications and human resources functions, for example. This resulted in a great deal of administration. As a business unit, we will have just one set of shared administrative functions, resulting in a more streamlined organization," says Johan Bergendahl.

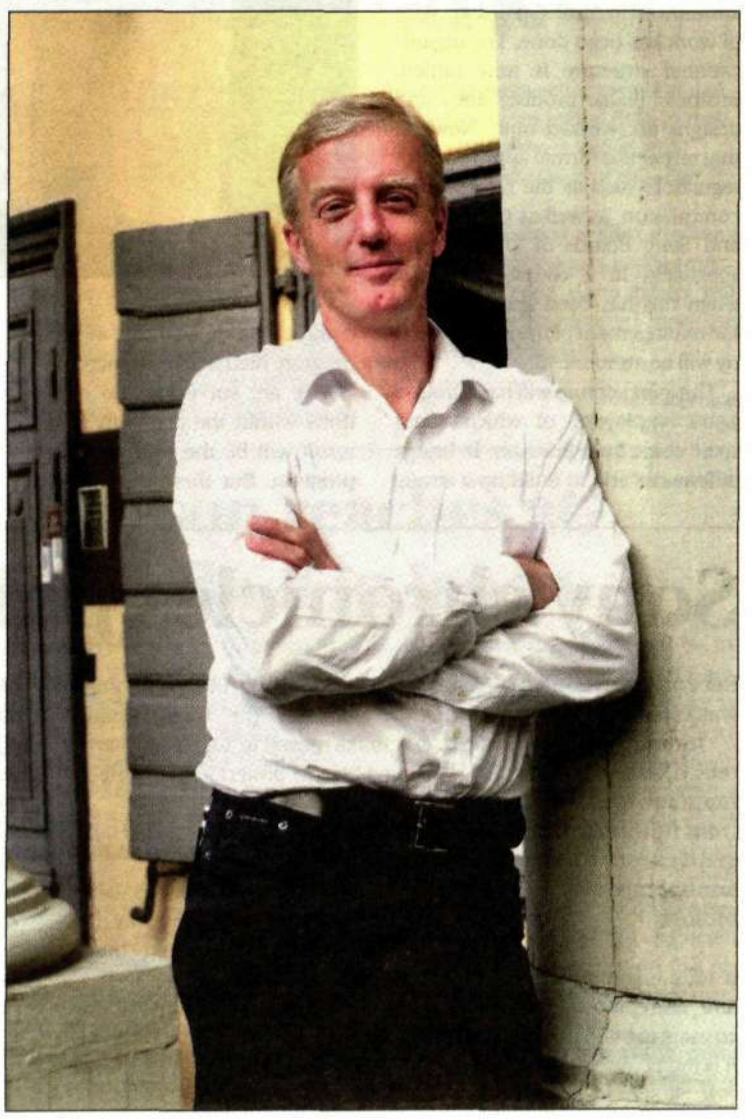
Enthusiasm and teamwork have been priorities within the Multi-Service Networks division, and Johan Bergendahl thinks that it has been a fantastic experience to have been involved in creating this atmosphere.

"I have the requisite tools to continue in this work. Internal communications are important. Employees need to feel involved in business developments and that they are an instrumental part of the successes. But I think the best way to create a positive work environment is to have a sound business operation. This is what makes it possible for us to have fun together," says Johan Bergendahl.

Management for the new business unit is rapidly being assembled, and Johan Bergendahl expects that the work will be complete by September 1. The merger between Multi-Service Networks and Data Backbone and Optical Networks does not include the transmission portion of optical networks. This operation will instead become part of the Transmission and Transport business unit.

"We're going to have a clearer feeling of working together towards a common goal. It's exciting to be given the task of overseeing all this. I foresee a number of exciting challenges for the new business unit."

Jesper Mott
jesper.mott@lme.ericsson.se



Sound business operations result in a positive work environment. Johan Bergendahl, head of the new Multi-Service Networks and Data Backbone business unit, has clear goals.

Photo: Ecke Küller

FACTS/JOHAN BERGENDAHL

Johan Bergendahl is 48 years old and lives in Stockholm with his wife and four children.

He has an engineering degree from Stockholm's Royal Institute of Technology and extensive experience working on solutions for fixed networks at Ericsson. Areas of expertise include transmission, switching and network management.

Nigeria opening the market in Africa

Ericsson is preparing to roll out Nigeria's first GSM networks. Three telecom operators – Nitel, MTN and Econet Wireless Nigeria (EWN) – received the country's GSM licenses, which were auctioned off in January. All three operators have chosen Ericsson as their supplier.

"These contracts are important to Ericsson's operations in the entire region," says Roland Guillou, President of Ericsson in Nigeria.

He goes on to explain that Nigeria is undergoing a process of democratization. With large supplies of natural resources and a population of about 128 million, Nigeria has the potential to become a key market. Ericsson is preparing to roll out the country's first GSM networks over a five-year period.

"Mobile telephony will be extremely important to Nigeria, since postal and communication services have been substantially neglected. Everybody is waiting to subscribe. We are now recruiting and mobilizing our forces to meet market demand and, by year-end 2001, we expect to have about 150 employees in the country."

First GSM networks

MTN, a South African operator, and EWN, a telecom operator based in Zimbabwe, bought two of the three GSM 900/1800 licenses that were auctioned off in January. The third license went to Nitel, a company owned partly by Nigeria's government-owned fixed telephony operator. The fixed network in Nigeria consists of 700,000 lines, but only half are operational. GSM networks have not been installed in the country until now. Ericsson has been contracted to build radio, switch and transmission networks for the operators.

Thomas Nilsson, account manager for MTN, says the operator hopes to achieve extremely rapid growth in its subscriber base. Initially, MTN will focus on coverage in southern and central Nigeria and the cities of Lagos, Abuja and Port Harcourt.

"In the long-term perspective, the company plans to provide coverage throughout the entire country," says Thomas Nilsson.

MTN was established in South Africa in 1994. In addition to South Africa, the company also conducts network operations in Rwanda, Uganda, Swaziland and Cameroon. Ericsson is MTN's sole supplier of telecom equipment.

"MTN's ultimate objective is to become Africa's leading mobile telecom operator," says Thomas Nilsson.

Two million subscribers

"The telecom market in Nigeria is untouched and, with its large population, the country offers very substantial business potential," says Hans-Olov Rauman, Ericsson's key account manager for EWN.

On behalf of EWN, Ericsson will start by expanding a radio network to provide coverage in Nigeria's southern region and the country's most densely populated areas.

Ericsson is Econet's supplier in Lesotho, Zimbabwe and Botswana.

Hans Olander, business manager for GSM in Africa and the Middle East, explains that Nitel will be privatized this year, and the Nigerian government is looking for an international operator to buy an ownership interest in the company.

"Nitel hopes to have 500,000 subscribers within one year."

Ericsson is the exclusive supplier to Nitel and MTN; the company also delivers most of the equipment for EWN's networks.

Initial traffic in the GSM networks is expected to start in August. The number of subscribers in Nigeria is projected at two million within twelve months after GSM operations begin.

Jesper Mott
jesper.mott@lme.ericsson.se

HELLO THERE

Zeljka Svensson

... head of the Customer Program Office and Supply at the WCDMA and PDC Systems business unit in Kista.

What does your unit work with?

"We work with the total UMTS projects – supply, or deliveries of specific programs for the first customers. Our work includes everything from technical development and skills development to deliveries, support and rollout. We help customers implement their UMTS networks efficiently and smoothly, enabling them to start offering services to their customers. Our work requires extremely close cooperation with different product units and Global Services. One of our most important objectives is to provide support for customer teams within Ericsson's local companies, which naturally work in direct contact with customers. Customer Program Office and Supply was established on January 1 this year, and we have slightly more than 70 employees."

What are your most important priorities during the coming months?

"Deliveries will be crucial. We must deliver the volumes promised to our customers, and the deliveries have to be made on time. Much of the 'rollout' will be made in parallel with our customers. "For test systems, we use containers that are filled with equipment. We did the same thing with test systems for GPRS, and this was highly appreciated by our customers. Work focused on equipment installations is conducted at Ericsson Mediacom in Katrineholm, which also worked on the GPRS containers."

How will the test systems be used?

"Test systems will provide opportunities for customers to learn how a 3G system actually works and familiarize themselves with possibilities created by the system. They will also enable our customers to provide demonstrations for their customers and test applications that demonstrate the mobile intranet as an everyday phenomenon."

How long have you worked for Ericsson and what is the most enjoyable aspect of your present job?

"I joined Ericsson 10 years ago and worked for Ericsson Enterprise before I was given responsibility for Customer Program Office and Supply. There are many enjoyable aspects, but what I appreciate most are the contacts I have with customers and the opportunity to help our largest customers raise the level of their networks to third-generation systems."

Gunilla Tamm
gunilla.tamm@lme.ericsson.se

Easier to use GPRS in Hong Kong

Consumer friendly. Therein lies the key concept for the GPRS launch in a project managed by Ericsson and Hong Kong telecom operator, SmarTone.

"The fundamental principle is simple – everybody should be able to use GPRS," says Kjell Arvidsson, manager of the project conducted under the working title eONE.

SmarTone recently completed a limited launch of the GPRS network delivered by Ericsson. Leading up to the more comprehensive commercial launch later in the autumn, marketing efforts will be critical. eONE is a concept to market the opportunities offered by GPRS.

"The goal is to provide better Mobile Internet functionality for end-users. We want to avoid the mistakes that were made during the introduction of wap."

He hopes to benefit from favorable experiences gained from NTT DoCoMo's successful launch of i-Mode, the Japanese telecom operator's mobile Internet service.

Experiences gained in Japan have been converted into a four-step approach in which each step is a combination of technical improvement and/or refinements of the user interface. The steps are numbered 0 to 3. Zero (0) signifies that no manual is required to start the implementation process. The telephone is configured automatically via SMS, and end-users can avail themselves of the service immediately.

The number 1 stands for a personal portal, whereby the same content menu is presented to end-users every time they use the service. The number 2 means the connection should take no more than two seconds. The last step means that no information should be more than three clicks away.

To implement the four-step approach, Ericsson's T39 mobile telephone has been re-programmed to create a shortcut to the portal through the left-hand arrow button.

eONE is being conducted in Hong Kong, but the project is also supported from Sweden by project manager Susanna Liljeqvist at Ericsson. Since Ericsson in Hong Kong is a part of the Chinese operation, a similar work method can also be used for China Mobile.

"eONE is an exceptional concept, and we plan to offer the same basic idea to other operators around the world," says Susanna Liljeqvist.

Mats Lundström
contact@lme.ericsson.se

FACTS/MOBILE TELEPHONY IN HONG KONG

- One of the world's most competitive markets, with six operators providing mobile telephony to a population of slightly more than seven million.
- 77 percent of Hong Kong's inhabitants own a mobile phone (March 2001).
- SmarTone is the third-largest operator with more than a million subscribers.

Wap + Internet = true

Wap 2.0 has arrived. The new version has brought wap and the Internet closer together, which is creating new opportunities for Mobile Internet.

The introduction of wap has been rather sluggish. Due to long waiting times for connections, complicated use and a limited range of services, user interest has not taken off as rapidly as originally anticipated. But now all that is set to change. A new version of wap that provides completely new opportunities has been released.

The specification was prepared by the wap Forum, a cooperation program involving 450 companies. Ericsson has been a driving force in Wap Forum, along with Nokia, Motorola and NTT DoCoMo.

One of the new version's most prominent features is its capacity to converge wap with the Internet. Convergence is supported by a common format called XHTML, which makes it easier to adapt Internet applications to wap.

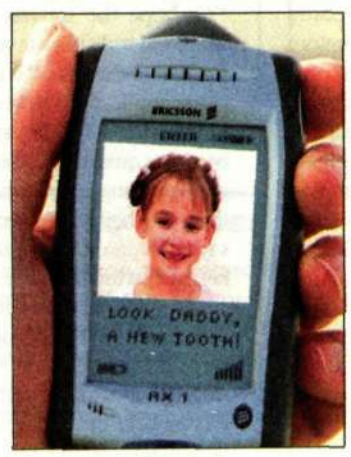
Several other Internet standards, including TCP, TLS and HTTP, will also be included in wap.

An expanded push function will also help users access current information. Users are able to access stock market information, including alerts when stock prices reach certain levels, and are also able to conduct real-time trades immediately. Online auctions are another service.

Wap 2.0 also supports MMS, multimedia messaging. Using MMS, text messages can now be combined with sound and images.

The new version of wap also includes functions such as calendar synchronization. It also supports configuration via data messages to help users initiate or update their terminals.

"GPRS and 3G are the main forces behind current development. When the first version of wap was created in the late-1990s, it was adapted to the limited bandwidth of the time. Everything is different today, and it's also easier to use Internet standards for the wireless Internet," says Peter Arnby, who represents Ericsson in the Wap Forum as a release manager.



MMS is expected to become a "killer application" of the same caliber as SMS.

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

REVIEW

Mats Lundström
freelance journalist

Give me a surf button…

With GPRS wap will have much more to offer end-users. In fact, GPRS will make all the difference to wap users.

➤ A recently conducted analysis of existing wap services showed that they do not measure up. Only a small percentage of the services passed the test unscathed according to Argogroup. Confusing interfaces, a low level of functionality and difficult interoperability problems between different kinds of terminals. These facts do not encourage use.

But what does wap have to do with GPRS? Quite a bit I would venture. Over the summer I've been testing GPRS. I've used it in ways that most people will actually be using the new packet data networks, that is, on the go – in subways, during traffic jams and while walking on foot. I've read e-mails sitting on my bicycle (without crashing), looked up departure times for night buses, found a good vegetarian lunch restaurant, checked stock prices and converted currencies, looked up weather forecasts, TV schedules, soccer results, world news, traffic information, and so on.

I've played Botfighter, which is incorporated into the launch of the Mobile Positioning System – Ericsson's concept for mobile positioning. I've even had my first "SMS argument" with my wife *who was in Greece on vacation. Good grief!*

Common to most of these mobile services is that they are wap-based. And wap certainly works better with GPRS. As an ordinary consumer, what I especially like is that it costs so much less. People who have used wap prior to GPRS know that it takes time to connect and that it is very expensive to be connected for a long time. With GPRS, you pay for the amount of data downloaded. As long as that simply involves wap services, there's no problem.

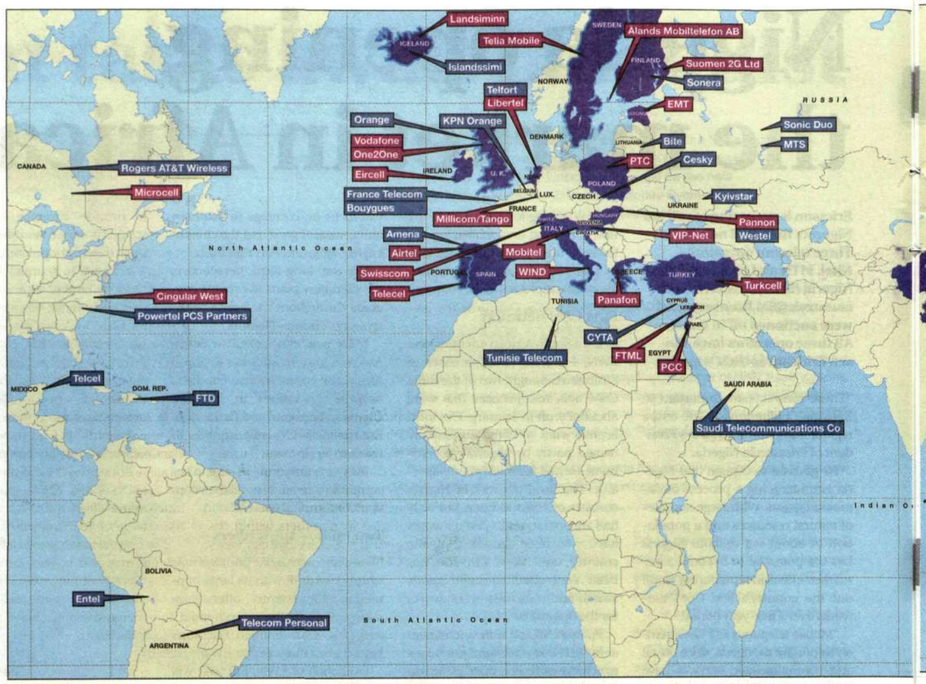
However, downloading e-mail with an attached document to a laptop or connecting to a company intranet will, on the other hand, remain a costly proposition for the foreseeable future. Operators need to be able to charge for business usage.

If costs alone are not enough of an argument for GPRS, the ability to be always on is enticing. For those who have become used to continuous Internet connections at work, it is liberating that mobile phones finally offer similar functionality.

However, there is no immediate difference in how one experiences the wap interface. Actually, it is somewhat disappointing. What I miss is telephones that have a large wap key, like Japan's NTT DoCoMo's phones have with their i-Mode button.

The button should be large and ideally equipped with a joystick to facilitate navigation. Once phones are equipped with color screens, then the GSM world will definitely have surpassed i-Mode.

I look forward to the day when Ericsson's new T68 is available in stores. The T68 has exactly the qualities that I am seeking – both a color screen and a joystick to navigate with.



Europe and Asia cover a total of more than 200 million GSM subscribers. Of the 70 agreements that have been signed, 30 GPRS networks have been launched commercially to varying degrees (shown in red). Ericsson's total GPRS market share is 45 percent, based on the number of end-users making use of Ericsson's GPRS networks.

Illustration: Björn Hägglund

Ericsson takes the lead on GPRS market

GPRS is definitely the major event of this year. Of about 160 operators that have invested in GPRS, half of them have already started offering GPRS services.

"We hope the interest of end users will truly have taken off by the end of the year. We need exciting applications to keep users online with GPRS. As wap access becomes quicker, people will enjoy spending more and more time on their GPRS terminals", says Philippa Andréasson, Market Analyst for GPRS at Ericsson.

For Ericsson, the prospects within GPRS technology look favorable. With some 70 commercial agreements with operators all over the world, Ericsson is actually leading the market. But not all operators have launched their services yet. Bogdan Sacuiu, head of the group of market analysts where Philippa Andréasson works, says:

"About 70 operators have already started offering some kind of GPRS service. Half of these have reached a real commercial launch, which means that all the elements are in place, the networks are up and running, and there is an offering of devices supporting GPRS in that specific market".

Bogdan Sacuiu

In order to entice end users to start purchasing phones, Ericsson has put considerable energy into capturing and holding their interest through the development and expansion of GPRS applications.

"The movement from GSM to GPRS is a service evolution", says Stefan Berggren, strategic project manager for GPRS Mobile Phones at Ericsson Mobile Communication.

"The same service infrastructures are provided, but with enhancements and improvements for applications".

With these improvements, one expectation is that wap browsing will increase due to GPRS's "always on-line" functionality. Furthermore, users will be charged for the actual data transferred, rather than the time spent browsing. Expected connection speeds will be up to around 50 kb per second, and will allow for faster downloads and an anticipated two to four seconds for access to the first wap page.

It is anticipated that this will result in an increase of the use of wap and a boom for Multimedia Messaging Services (MMS). MMS is a standard endorsed by almost all of the world's major terminal manufacturers and operators,allowing a mobile subscriber to send and receive messages using text, image and video.

Real media mobile

Later this year, several suppliers, including Ericsson, will start sales of GPRS phones with MMS. Ericsson's first MMS phone will be launched in the coming months. It is called the T68 and offers a color display, built-in antenna and GPRS.

So far, Europe leads the GPRS-market followed by Asia – in particular Singapore and Hong Kong. The slowest markets to develop have been the Americas, although Canada and the United States may move forward with their GPRS launches in the fall. Europe and Asia cover a total of more than 200 million GSM subscribers. Of the 70 agreements that have been signed, 30 GPRS networks have been launched commercially to varying degrees.

Boost of revenues

By the end of 2001, Ericsson expects that nearly all GPRS operators who have purchased systems will have them deployed, and that an increase in the purchase of GPRS mobile phones by consumers and professionals will give revenues a boost. In total, some 60 operators offer GPRS service today.

Kelly Fox
freelance journalist

Elin Dunås

FACTS/**MANY GPRS CONTRACTS**

Ericsson	70
Nokia	51
Motorola/Cisco	14
Alcatel/Cisco	5
Nortel	9
Siemens	7
Lucent	1

The figures show the number of GPRS agreements signed by various suppliers. The many test systems that are under way are not included.

FACTS/**MULTIPLE LAUNCHES**

What does it really mean when an operator has "launched" GPRS? There are three generally accepted definitions in the industry:

1. Pre-commercial launch. The operator tests a newly installed system.
2. Friendly User/Enterprise launch. A preselected group is allowed to use the system for free or at a reduced cost. One example is NTT DoCoMo's 3G testing, for which it recruited testers.
3. Commercial launch. This is when a network is opened up for use by the general public.

Ericsson's new GPRS phone, the T68, offers always on connections. It is the company's first mobile phone to sport a color display.

FACTS/**FEW GPRS PHONES**

At press time, only Motorola and Ericsson had begun offering GPRS phones – Ericsson has introduced two models and Motorola three. Most other manufacturers are expected to begin selling the new phones later this year, however. According to rumors, Siemens is next in line.

Everyone is eagerly awaiting Nokia, the largest player in the mobile phone market, whose first GPRS phone will be launched during the fourth quarter.

A broad range of GPRS phones will benefit all of the players in the GPRS market, since without new phones, there will be no users of GPRS services.

Gradual build out of GPRS networks

Faster, cheaper and easier to use. Anders Byttner of the UK's Argogroup has long preached the virtues of GPRS. In fact, he thinks it's better to wait for something that really works, than to rush a service that doesn't live up to its potential.

Mobile data via GPRS needs to become a better experience than it is today, according to Anders Byttner.

Anders Byttner

"When it comes to wap, it's obvious that it was pushed too hard, too fast. I think operators have learned a lesson from that", says Anders Byttner, Service Solutions Manager at Argogroup, one of the companies that works to ensure that various mobile data applications function properly, regardless of which telephone or network is being used.

This is a fairly important issue, according to the company, which says that people have underestimated interoperability problems between various phone models and networks. It has been difficult to get data applications to function in the same manner regardless of the network or terminal used.

Like many others within the industry, Anders Byttner views GPRS as an incredibly important product rollout.

"Wap functions very differently on different terminals. The price needs to be reduced and services need to be sped up. It appears that GPRS will be able to solve those issues", says Anders Byttner.

Only when subscribers start using GPRS will they discover the fantastic opportunities that packet data on mobile networks has to offer. Anders Byttner believes that MMS especially will be a hit.

"A picture says more than a thousand words. If I want, for example, to describe something tangible to a friend, sending a photo or a video clip has so much more effect than simply trying to describe it in words".

The only factor that might be a hindrance is if operators set prices too high, according to Anders Byttner. The Yankee Group analyst firm concluded in a July report (see *Contact* no. 13) that operators need to lower and simplify their GPRS rates in order for people to begin using data services more regularly.

Mats Lundström
contact@lme.ericsson.se

Elin Dunås

FACTS/**GENERAL PACKET RADIO SERVICE**

GPRS, General Packet Radio Service, is the GSM network's upgrade to packet data, transforming the telephone networks into something more akin to data networks. Data transmission speeds are much higher than GSM, approximately 50 kilobits per second compared with 9.6 kbit/sec for GSM. End users will be able to both place calls and send/receive data simultaneously. GPRS is also known as 2.5G since it is part of the path towards a third-generation mobile network or 3G.

INVITATION

WATCH OUT IF SOFTWARE IS YOUR BUSINESS

If software is the key to your success, meet us at the third annual Ericsson Rational User Conference 2001. You'll hear all about the latest tools, trends and tricks of the trade from Rational's technology leaders and Ericsson experts. Among all participants, you will be able to meet Dr Jaak Urmi, Corporate Director Software Technology Development, Ericsson.

Your opportunity to take part of the latest in software will disappear after two days, **don't miss it.**

Ericsson Rational User Conference 2001

Welcome to Scandic Hotel Infra City, Upplands Väsby, Sweden, 10th and 11th of October 2001.
Register at the conference site: http://accelerator.ericsson.net

Rational the e-development company™

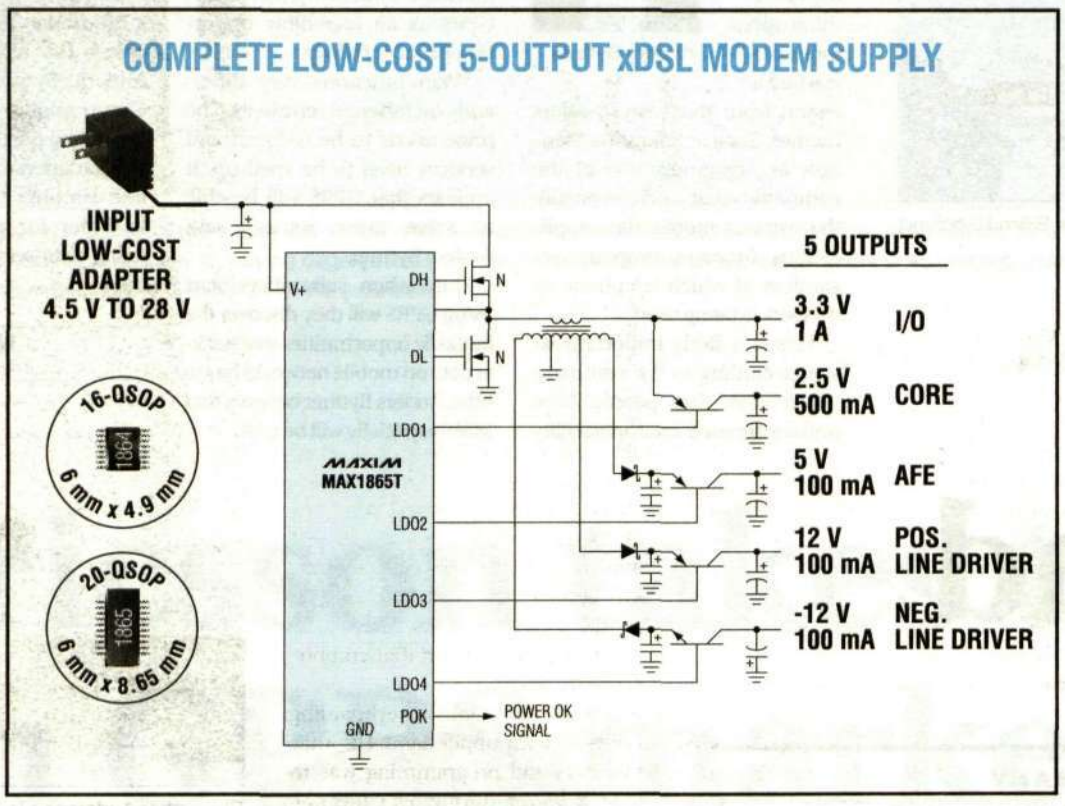
http://accelerator.ericsson.net

LOWEST COST 3 & 5 OUTPUT xDSL AND CABLE MODEM POWER SUPPLIES

High-Efficiency Step-Down Controller Plus Multiple LDO Controllers on a Single IC

Use the MAX1864 and MAX1865 power supply controller ICs to build the lowest cost xDSL and cable modem consumer premises equipment (CPE) power supplies. They integrate a high-efficiency step-down DC-DC controller and 2 to 4 linear regulator controllers to provide all the required voltages for CPE equipment. The current-mode step-down controller uses an external dual N-channel MOSFET to provide low-cost synchronous rectification for high efficiency and lower heat. To further save cost, no external current-sense resistor is required. Switching frequencies of 100kHz and 200kHz permit the use of low-cost magnetics and aluminum electrolytic capacitors. The linear regulator controllers drive inexpensive external bipolar junction transistors (BJTs).

- **MAX1864**
  - Step-Down Controller
  - 2 Positive LDO Controllers
  - 16-Pin QSOP Package
- **MAX1865**
  - Step-Down Controller
  - 3 Positive LDO Controllers
  - 1 Negative LDO Controller
  - 20-Pin QSOP Package
- No Current Sense Resistors Means Less Cost
- Step-Down Output: 1.25V to 5.5V
- LDO Outputs: ±1.25V to ±15V
- Power-OK Checks All Outputs
- EV Kit Available to Speed Designs



In an xDSL modem application, the MAX1865 provides low-cost supplies for the I/O, core, analog front end (AFE), and positive and negative line drivers. It fits in a small 20-pin QSOP package. All outputs can be adjusted with feedback voltage dividers.

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

2001 EDITION!
FREE FULL-LINE DATA CATALOG
ON CD-ROM

MAXIM

www.maxim-ic.com

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.

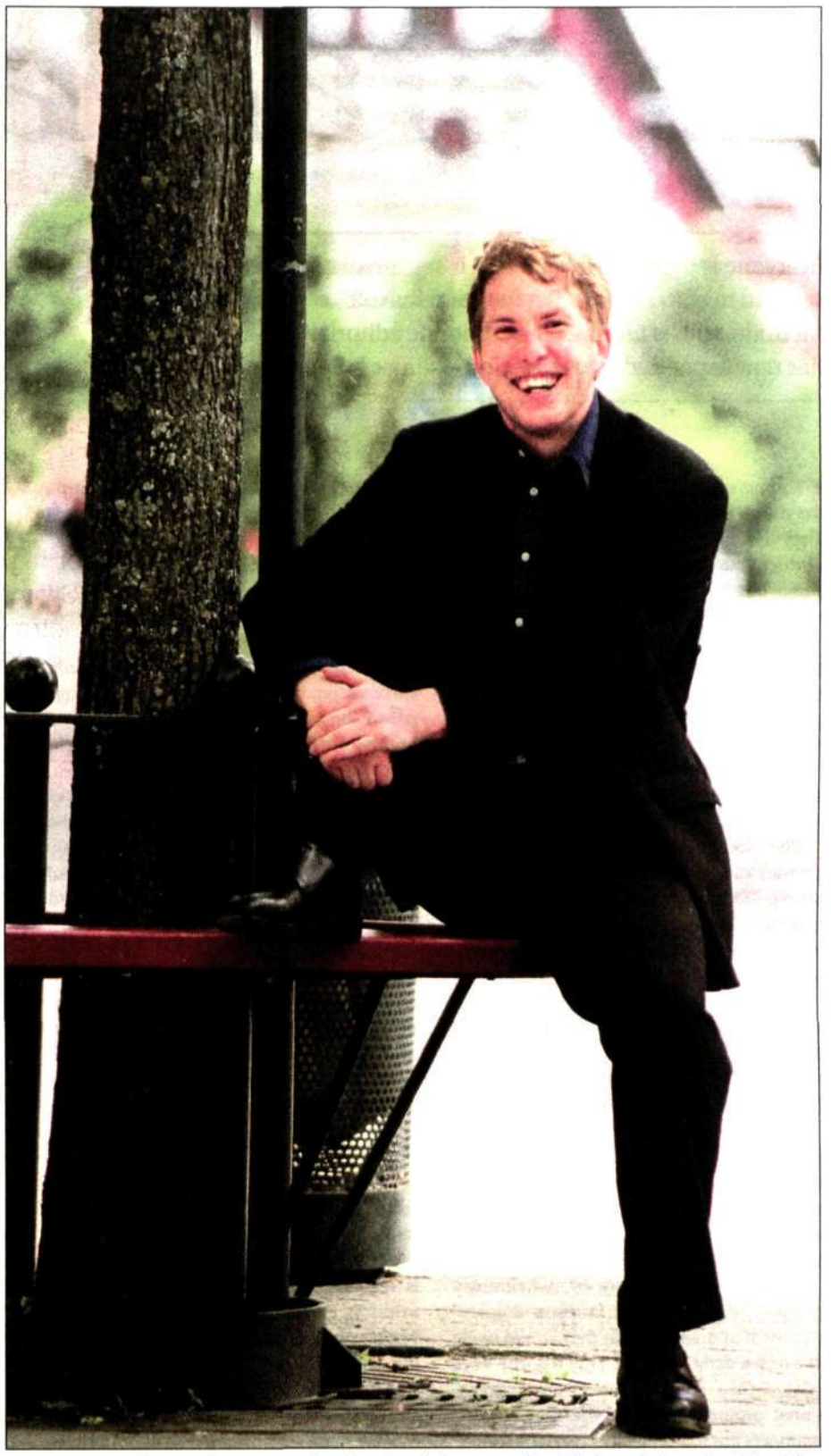
MAXIM is a registered trademark of Maxim Integrated Products. © 2001 Maxim Integrated Products.

It might seem that 27-year-old Christoffer Andersson is a bit too young to hold the title of Senior Specialist. However, in just four years at Ericsson, he has already managed to make impressive contributions.

"When people book business meetings with me, they sometimes think that the wrong guy has shown up. They expect someone older," says Christoffer Andersson.

Christoffer discusses his background with *Contact* and his work on a book that is the ultimate guide to the Mobile Internet.

Young whiz guides developers



Christoffer Andersson is young, and yet he already has considerable knowledge about the Mobile Internet. Now that his book on the subject has been released, his mission is to ensure that it is used by the software industry that develops applications. Photo: Rolf Adlercreutz

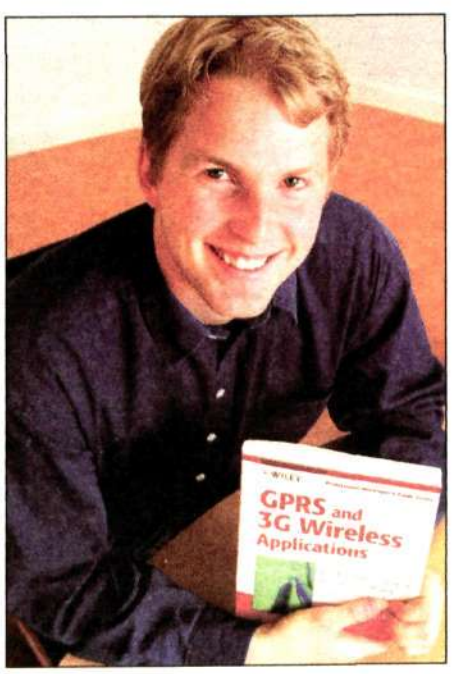
➤ Christoffer Andersson is a technical manager for 2G and 3G terminals and applications. His department ensures that terminals and applications operate with the systems that Ericsson supplies. Included in this work is the assembly of demo solutions for trade shows and demonstrations, helping customers visualize the kinds of opportunities that will be available with 3G. Their work also ties into the global Mobile Applications Initiative (MAI), which promotes application development.

This past winter, Christoffer Andersson finished writing a book entitled, "GPRS and 3G Wireless Applications," which is a handbook for those who want to develop applications for the Mobile Internet. Ericsson has supported the project and the book is now available for purchase through Amazon.com and other Internet bookstores.

Clarity at last

Although the book is primarily aimed at application developers, Christoffer Andersson hopes that everyone will benefit from it. Expert skills are not a prerequisite.

"A journalist contacted me and said that she had read the book from cover to cover, skimming over only the most technical sections. She explained that the book had clarified to her what wap, GPRS, 3G and the Mobile Internet actually are, which was very nice to hear."



Christoffer Andersson was born outside Umeå in northern Sweden. As a boy, he played with computers, laying the groundwork for what would become his occupation.

"When I was ten, I bought my own computer. I had been saving money in a 'computer piggy bank' for quite some time. When the relatives came to visit, they would give me a donation. Eventually I had saved enough to buy a Spektrum 128k. I played games and taught myself programming on that computer," Andersson recalls.

After several years of intensive keyboarding, other interests took the upper hand. His interest in computers and programming was rekindled later, however, during his education. Those early computing attempts made it easier to follow computer instruction at university.

Nine patents

Immediately following the completion of his engineering degree at the University of Luleå in 1997, he began working at Erisoft in Luleå. His first task was to develop software for the WCDMA system. Eventually, he moved over to systems design and took on a more comprehensive role working on WCDMA system functions. He developed algorithms for radio base stations and currently holds nine registered patents.

"It was great to work with the people at Erisoft in Luleå. They were very knowledgeable and my experience there was invaluable."

FACTS/CHRISTOFFER ANDERSSON

Facts about the author of
GPRS and 3G Wireless Applications:

Name: Christoffer Andersson
Age: 27 years
Resides: Stockholm, Sweden
Family: Girlfriend. Mother and father in northern Sweden. Brother in Gothenburg
Interests: Soccer, fly fishing and his friends.
Inspiration: Winning. Ericsson is my team and we're going to win

After a couple of years at Erisoft in Luleå, he was given the opportunity to work for Ericsson in Silicon Valley.

"I wound up in a group that was working on the precursor to MAI. It was called the GPRS Applications Alliance and our job was to help developers understand the value of GPRS and how mobile data services should be developed in comparison with ordinary Internet services."

That time in California, spent with demanding partners and practical testing of applications, gave Christoffer Andersson experience that subsequently ended up in the book. He also learned a substantial amount from the American work culture.

"They are more straightforward and tougher in the US. They are quick to prioritize what needs to be done. 'We're not good enough at this? Okay, then we'll shut that down.' They are clear about what they want to achieve. If they call a meeting, they want it to result in a decision, not a decision to hold another meeting," says Christoffer Andersson.

Better balance

While Christoffer Andersson appreciates American efficiency, he thinks that Swedes have managed to strike a better balance between work and leisure. In the US, there is a culture that rewards those who work 19-hour days. He does not believe that this means they are more efficient or can accomplish more.

"I enjoy being able to switch back and forth between intensive periods and times when I can recharge. You should be able to give work your all, but still be able to wind down and be satisfied with the effort you've put into it."

What is it about Ericsson that makes it the right company for you?

"One can draw an analogy to sports and love of the team. Ericsson is my home team. I've built up a contact network of pleasant and talented individuals and I am constantly learning. It's quite possible to switch job responsibilities while remaining within the same company. I've worked in Luleå, Silicon Valley and Stockholm, all the while working for Ericsson."

Although the book is now available in stores, Christoffer Andersson still has a mission that consists of ensuring it will be used by the software industry.

"I want to continue to grow in the job that I have here. Our company's success is dependent on developing applications," says Christoffer Andersson.

Jesper Mott
jesper.mott@lme.ericsson.se

Several days' work reduced to 5minutes

Everyone is in place. The lighting is set. Small microphones are secured to shirt collars. "Let the cameras roll," says Graeme McBride, who is filming. The corporate editorial staff at Ericsson has now expanded into television – join us behind the scenes.

Many hours of work go into a 50-second feature for 5minutes. Didier Chincholle works at the Usability and Interactivity Lab at Ericsson in Stockholm. Here, he is seen being interviewed by Lars-Magnus Kihlström of the corporate editorial staff. Graeme McBride is behind the camera and Eric Westring is the sound engineer.

Photo: Ecke Küller

➤ The person I am to interview steps into the room. Hello there, this is the film team. They shake hands. Take a seat here and we'll powder your face a little. "No, you're looking good, but the lights are very strong," the make-up artist explains.

"If you want, you can hear the questions before we get started," I say. The person I am to interview nods and listens. He seems quite relaxed, but I know that he has previous experience of TV interviews.

"Sit in these chairs and look this way. Thank you, that looks good," says Graeme McBride.

The sound engineer attaches microphones to our shirt collars. The lights are strong. "Do you feel comfortable about answering questions in English?" I inquire. My subject replies that this will not be a problem.

"OK, we're ready to roll," says the cameraman. The cameras start up. For a fraction of a second, I see signs of insecurity in the person I am to interview. "What was the first question again?" he asks hurriedly.

Ericsson's first company-wide news program, 5minutes, was broadcast on June 12. In addition to magazines and web news, the corporate editorial staff is now making a weekly news broadcast in collaboration with the Jarowskij Media production company.

There have been many, overwhelmingly positive, reactions from Ericsson employees. Most of them say that they would really like to see daily TV news. The majority have offered their congratulations on a professional program. Some think that the announcers are too typically British or American.

More visible managers

A one-minute news feature requires at least a day's work for many people. The preparatory work consists of the reporter reading up on the subject and preparing questions. A time is booked with the interviewee and the camera team. Rigging the lights, filming and conducting the interview takes a couple of hours. All the material must then be edited and put together. Subsequently, a manuscript is prepared for the TV announcers to use when they record their part in the studio.

Lars-Magnus Kihlström works as a reporter with the corporate editorial staff. He regards the greatest difference compared with writing articles for the web and magazines as having to think in a completely new way.

"You have to think in images and be extremely clear. Filming what is happening is as important as the interview: for example, the signing of a contract or a meeting that is being held. To date, I have met with a large amount of understanding for this," he says.

Describing abstract but important assignments within the company, such as the efficiency program, is a challenge, according to Lars-Magnus Kihlström. He also describes the many advantages of the TV medium.

"The executives and management become more visible – in a way, they come closer to the employees. The longer, 'close-up' interviews provide an excellent opportunity to speak about goals and strategies. It is also important to let ordinary employees express their opinions in various matters," Lars-Magnus Kihlström continues.

Urban Ermling is creative image producer for 5minutes. He works for Jarowskij Media and has 14 years of experience in television. He has seen that technical development has paved the way for TV and that increasing numbers of large companies are investing in corporate web-based television. In Sweden, a number of major companies make use of TV and this trend has been under way in the US for several years.

"Intranet, with sufficient bandwidth, and satellite networks, enables companies to create their own TV programs," says Urban Ermling.

"TV is a medium that is easy to take in – it arouses feelings and has an enormous impact," he continues. "Everyone has five minutes to spare sometime during the week to keep themselves up-to-date with what is happening inside the company."

Great need for information

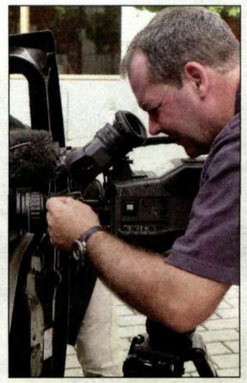
Some of the employees who e-mailed the editorial staff asked how much it costs to make TV and how the management motivated this investment. Henrik Brehmer, who is responsible for internal information at Ericsson, explains that the Business TV development comes at a time when Ericsson has a considerable need for internal information, probably more so than was the case six months ago.

"5minutes constitutes a strong complement to our web news and Contact, where we are now able to achieve speed of information, combined with greater detail and analysis. The television medium gives us an opportunity to give visibility to our operations and management in a completely new way by conveying the management's intentions and decisions," he says.

To allow the production of even better programs in the future, a network of film crews around the world is being established, so that programs reflecting all of Ericsson's operations can be made cost-effectively.

Direct broadcasts and longer features – for example, from the presentation of interim reports and from trade exhibitions – are being planned for the future. There are also plans to construct a dedicated studio at Telefonplan in Stockholm, in order to increase the rate of production and the making of several programs per week.

Ulrika Nybäck
ulrika.nyback@lme.ericsson.se



Graeme McBride has great responsibility. He ensures that the camera rolls and the pictures are good.

Coverage can grow with more power

One of the aims of 5minutes is to provide the latest news to as many employees as possible. To reach this goal, certain technical obstacles must be overcome: for example, higher network capacity is required and computers must be correctly configured.

➤ For the first time, Ericsson is to provide a news broadcast to reach as many company employees as possible. The intention is that the personnel should have a generous overview of events within the company and that an interest should be generated for finding out more about various areas.

Today, anyone with a correctly configured PC, with the right sound and graphics cards can see the news programs. People who are currently unable to see 5minutes are employees who work in a Unix environment or who have no computer at all.

Alar Soosaar

"We are making efforts to create an acceptable solution, so that Unix users can also be included. One solution could be for the program to be shown in conjunction with weekly meetings for those who are interested. There is usually at least one Windows PC per unit and these are often used for presentation," says Alar Soosaar, technical manager for the project.

"There is often access to a joint Windows PC for administrative purposes and this should also be available for viewing 5minutes," he continues.

Personnel who want to know what has been said in a news program, but are unable to see the video version, can always read the transcript, which is located on the 5minutes website, where related links are also included (see link below).

The corporate editorial staff are receiving quite a number of questions and comments relating to the program. Some ask why the video window is so small and why the image freezes during certain sequences.

"It's a matter of network capacity. When we gain higher capacity in the data network, the picture can become better and perhaps it will be possible to make the video window larger. However, at the moment, it is not possible to compare web TV with ordinary TV in terms of image quality," Alar Soosaar continues.

The most common question that lands in Alar Soosaar's mailbox is whether there is a Unix version of the software, which there is not at the moment. Another question is why the user cannot access the media servers.

This may be due to the low level of capacity in the data network or that the computer is incorrectly configured. Read more about this under the Help link on the 5minutes website.

For the future, it is intended that it will also be possible to show the program on TV monitors, for example, for workers in production plant environments. In the long term, it will also be possible to download the program to laptops or handhelds and watch it at home. There are also ideas that programs like 5minutes could be made available on the external websites on the Internet or Extranet.

Ulrika Nybäck

inside.ericsson.se/5minutes/

inside.ericsson.se/5minutes/info/troubleshooting.html

EMPLOYEES' OPINIONS ON 5MINUTES

Eastt Wu, head of external press communication at Ericsson in Taiwan:
"I watch the program each week. I like it – it helps me to keep up-to-date with what is happening within the company.

"It would be good if the TV screen could be enlarged and if there were fast-forward and rewind buttons to make it possible to watch specific features again."

Ragna Jupither, web editor, LM Ericsson, Telefonplan, Stockholm.
"I find the program excellent and I watch every week. It is good that all the information has been compiled. I don't have to spend my time searching through magazines or on the Web.

"It is easy to absorb the information when it is presented verbally and in pictures. However, the program would be better if the features were made more lively with pictures. At the moment, it's rather static."

Hans Lundberg, General Manager, Ericsson Australia, group co-ordination
"5minutes often includes current issues with a high news value. I try to watch each week.

"I think that the focus should be on short news items with a high news value that can be disseminated throughout the organization."

Kwan-Young Nah, senior solutions consultant, Ericsson Radio Systems
"This feels very interactive and I like it a lot, but I have only seen one broadcast to date. TV is not as formal as written news and this generates stronger feelings.

"5minutes would be better if it were 10 minutes long instead."

Anette Rydh, Managing web editor at LM Ericsson, Telefonplan, Stockholm
"I have seen all of the programs except this week's edition and I have found them good. As far as content is concerned, I feel it refers to me.

"Obviously, it can be improved and be made to have greater impact, but it is difficult to say what is missing because there hasn't been anything like this before."

The Telecom Corridor, north of Dallas, has undergone enormous growth during the past decade. The area is a kilometer wide, nearly 20 kilometers long and is expected to accommodate 110,000 workers by 2010.
Photo: Tommy Ottebjer

Corridor full of telecom companies

Just outside Dallas, Texas, in the US, is Telecom Corridor, one of the world's largest industrial areas for hi-tech companies. The telecom companies are the dominant employers and 70,000 people work in the area. Ericsson has established its new head office on the frontline of the Telecom Corridor.

➤ The Telecom Corridor starts in Richardson, just north of Dallas. Visiting Richardson is like stepping into a high technology world. No matter what direction you look in, enormous buildings with familiar logos catch your eye. Most of Ericsson's competitors have offices and development units located here.

Telecom Corridor has undergone enormous growth during the past decade, both in terms of the number of new companies becoming established and the expanding area, yet the North Texas Council of Governments predicts that the area will grow even more during the next decade. It believes that, by 2010, 110,000 people will be making their living in the area.

If this is the case, Telecom Corridor will become the largest concentration of employers in North Texas, exceeded only by downtown Dallas. At Ericsson, there is no objection to crowding together with an increasing number of competitors.

Many benefits

"There are many benefits to physically working so close to our competitors", says Bob Gessel, head of Business Innovation at Ericsson's head office in Plano, Texas.

"There is an amazing amount of knowledge gathered here and many people with rare special know-how come here to work, either for Ericsson or some other company".

Bob Gessel

Ericsson recently relocated its Texas operations from Richardson to Plano, some 20 kilometers to the west. Plano is currently on the frontline of the Telecom Corridor expansion and the construction cranes are vying for space. Ericsson's new building will soon be complete.

However, the foundation stones for Telecom Corridor were laid as early as 1956, when Texas Instruments established a training center for its employees in the area. The following year, the renowned US electronics company, Collins Radio, opened premises nearby. Collins Radio was acquired in 1971 by Rockwell, which subsequently sold the unit containing Collins Radio to Alcatel in 1991.

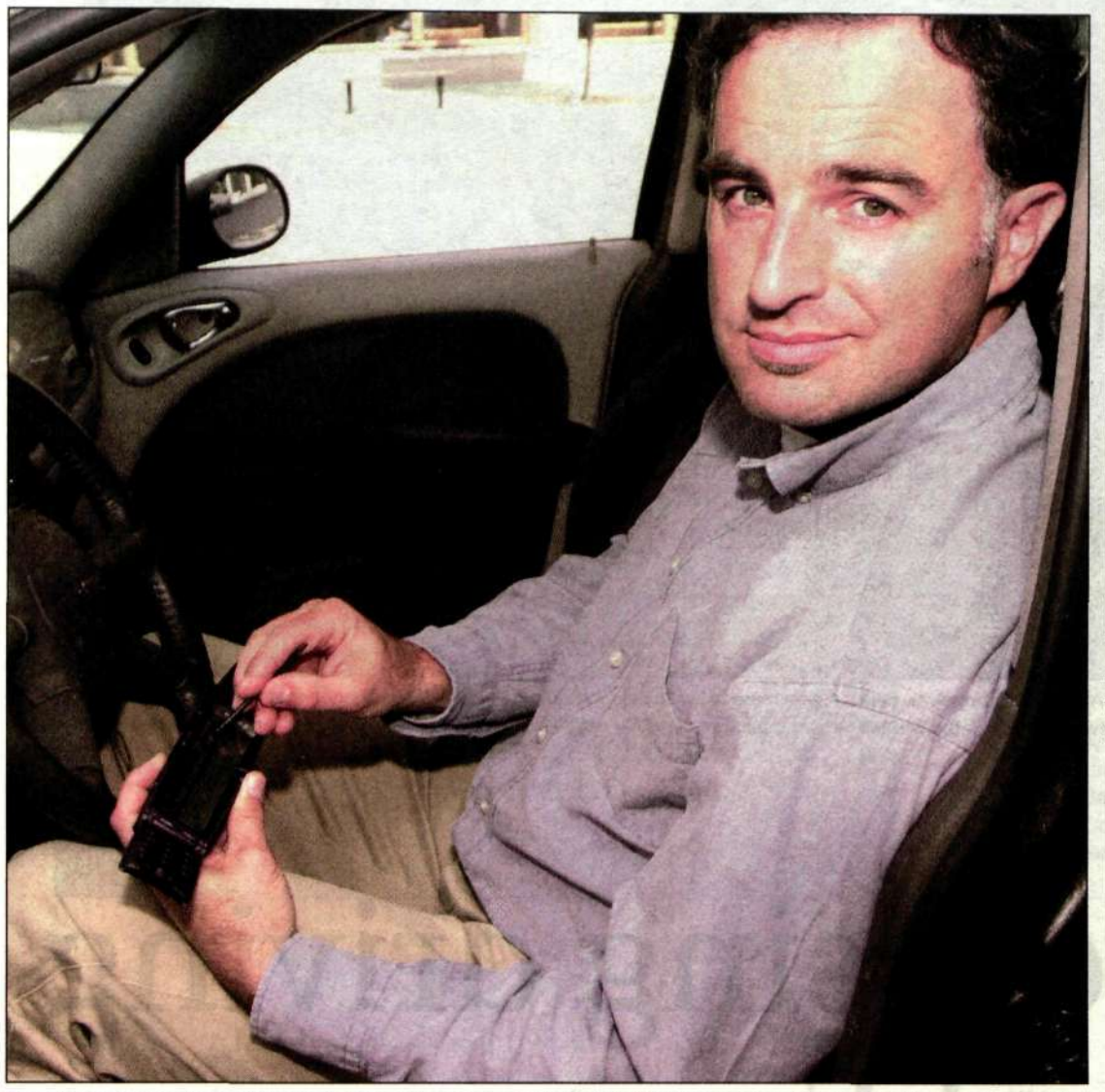
Attractive Dallas

The name "Telecom Corridor" was coined a few years ago and originates from the geographic appearance of the area. It is only about a kilometer wide and can be likened to a long corridor.

But why is it that all the datacom and telecom companies choose to locate around Dallas?

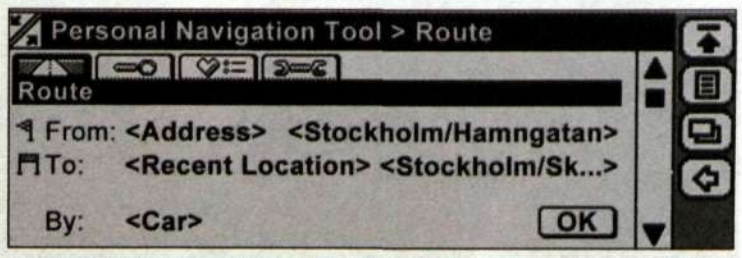
"There is an excellent business climate here in Dallas/Fort Worth. Rents are low, as are taxes, and it is easy to recruit high-quality personnel. People come and go between the various companies and this will be the case as long as Telecom Corridor continues to grow", Bob Gessel concludes.

Jenz Nilsson
jenz.nilsson@lme.ericsson.se



Didier Chincholle is one of the designers at the Ericsson Usability and Interactivity lab in Kista, which developed the Personal Navigation Tool, a mapping and traffic application for wap.

Photo: Ecke Küller



On the search screen, the starting and ending point of the trip is entered. The system keeps track of the users current position, but it is possible to get a map of another city. Public transport information can also be downloaded.

The scrollable map shows the route, distance and travel time. It can also be zoomed in or out. Clicking on Directions provides a written route description. It is also possible to save a route description for use at another time or to send as a message to someone else.

Part of the system keeps track of the traffic situation along the route one is planning to take. It is also possible to subscribe to traffic information for a predetermined route, enabling users to receive a message in the morning about traffic conditions along their route to work. The Alternative Route function provides suggestions for other roads to take to avoid traffic jams.

Positioning – a craze in mobile services

The Personal Navigation Tool – a new, easy-to-use positioning and map application – attracted widespread interest when it was demonstrated at trade shows earlier this year.

"Now, every operator wants the chance to earn money by offering location-based services," says product manager Alex Burden.

➤ Positioning applications, the ability to adapt services based on where a mobile phone user is located, represent one of the hottest areas in Mobile Internet today.

Ericsson is currently conducting several projects in the area. One of the most interesting user interfaces is called the Ericsson Personal Navigation Tool.

With the service, users can quickly receive a route description along with a map showing the way to their destination, whether it be via car, on foot or using public transportation. Automobile drivers can also receive information about traffic conditions along their route and are given suggested alternative routes.

Yet another function offers information about stores, hotels, restaurants and other points of interest along the route.

It is even possible to customize the service, enabling people to retrieve information they are interested in, and to allow advertisements to flash for a few seconds.

Limited access

So far, the application has only been developed for the R380 phone, but work is underway to adapt it to other phone models and screen sizes. The application was developed by the Ericsson Usability and Interactivity lab in Kista, which previously created a wap banking service for the swedish bank SEB.

"Our task has been to ensure that these applications fulfill the needs of users. The menus should be easy to understand and use. This also applies to the navigational structure – you shouldn't have to click 20 times to get the information you want," says Didier Chincholle, designer at the lab.

The Personal Navigation Tool was developed in conjunction with France's Webraska, one of the world's leading developers of Internet and wap applications. The company provides wap maps for cities all over the world, including all the cities in Europe, as well as information about more than a million points of interest and 20 million kilometers of roads.

Not only is the application easy to use, information is also quickly downloaded to mobile phones.

Alex Burden

"The speed of an application depends on how it is designed. Instead of waiting to be connected to a new page, our application sends brief requests to various databases. This means that while the request for a map is being processed, traffic information about the travel route is already being prepared. This is why everything takes only seconds once the system is installed with the operator," says Alex Burden, product manager for the Ericsson Personal Navigation Tool.

The application was demonstrated this year at the CeBIT and CommunicAsia trade shows, among others.

"We're noticing a great deal of interest. Operators are starting to make serious investments in positioning technology and at trade shows many have been almost taken aback by our product," says Alex Burden.

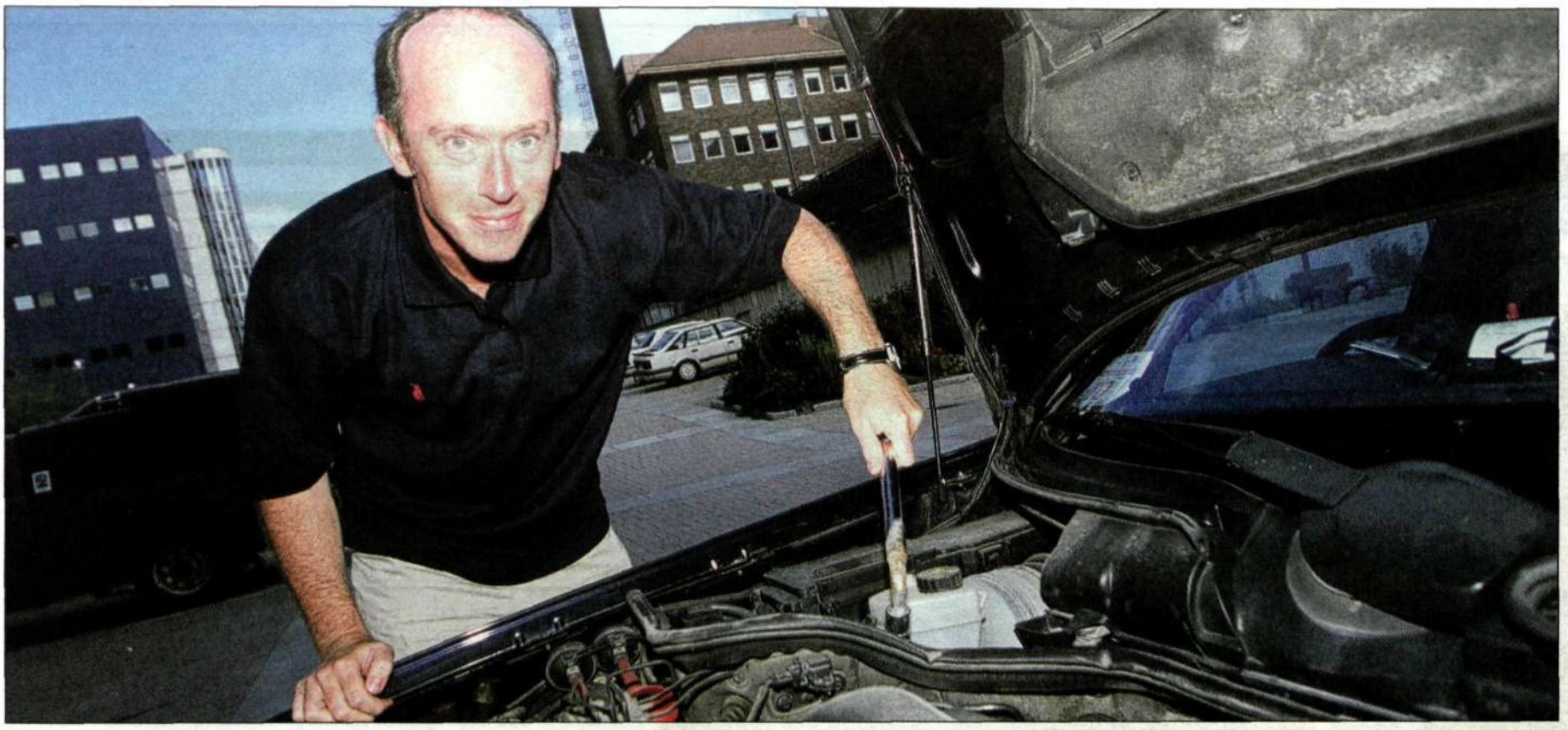
Pinpointing emergencies

The positioning industry has also been given a boost by a planned change in US legislation. The law, which has been proposed to take effect October 1, requires the location of all mobile phone calls placed to emergency call centers to be determined with a high degree of accuracy. With Ericsson's Personal Navigation Tool, operators will have an opportunity to expand their usage of positioning technology, recouping some of their investments.

"We now see that all operators are now inquiring after location based services, including games, directional guides and e-commerce. They've seen that it exists and works and they want it now," says Alex Burden.

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

5 inside.ericsson.se/5minutes➤archive➤shows➤August 28



Using any other name than Ericsson in marketing was far from self-evident. "At this time, however, the Ericsson brand was so strongly linked to mobile telephones that we really needed a name of our own," recalls Johan Lange. As the name implies, the telecom network, which is the world's largest machine, certainly needs an Engine. Photo: Alexander Farnsworth

Smart advertising driving force behind Engine

It all seemed to happen so quickly. Suddenly everyone was talking about Engine. But the solution that saved the division for fixed networks was not born overnight. The march toward success was obstructed by frantic advertisers, heated discussions, frustration, desertions and skepticism. But also made possible by fantastic visions of the future and wild enthusiasm.

➤ Two years ago, the division for fixed networks was the black sheep of Ericsson. Losses were so heavy that many wondered when the unit would be closed. Despite the dismal figures, however, there were a number of attractive products and many ideas about how they could be made even better.

A group of strategists from the Public Networks and Datacom Networks business units had also charted Ericsson's approach to networks of the future. In January 1999, this vision, which went under the name of next-generation networks (NGN), resulted in a breakthrough contract with the British operator BT.

"We had no products ready for delivery, but we secured the contract by promising to develop exactly what they needed. It was a daring decision by both parties," recalls Johan Lange, who was one of those who would soon launch Engine.

Up until that time, there had been some talk about NGS, next-generation system, a hybrid switch based on AXE and the AXD 301 ATM switch, which was the principal component in the BT contract. The development portfolio also included a number of similar solutions based on Voice over ATM.

Cool technology

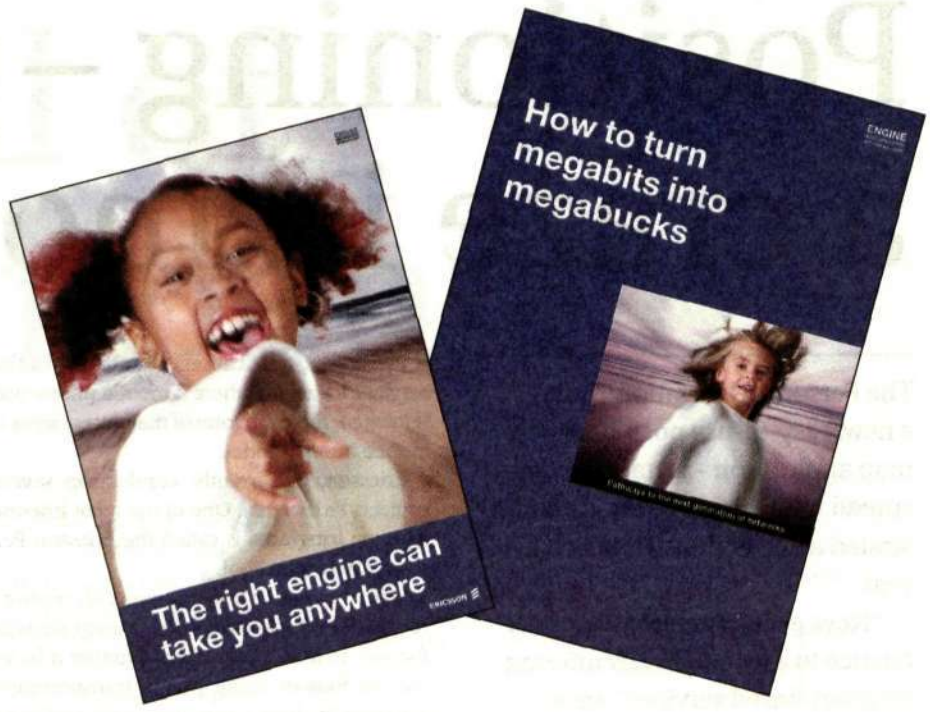
Following the BT contract, Johan Lange and his colleagues were given the task of determining whether the solution could be sold to other operators.

They quickly realized that a uniform concept was needed that would work for all customers.

"We eventually decided that we should market the coolest and most sophisticated technology under development at that time and that, in the meantime, we would sell AXE and existing solutions by promising that they would work with all the new gear," reveals Johan Lange.

The basic idea, that operators would be able to migrate to the next generation using existing technology, was conceived at an early stage by engineers at Ericsson Utvecklings AB and the Voice over ATM product unit. This point was to be particularly emphasized.

Today, it all sounds so easy and self-evident that it is hard to comprehend what a momentous idea this was.



The theme for the first campaign was migration. It emphasized that the Engine solution saves money for customers and provides a platform for the future. During the autumn, a new campaign will convey the message that Engine limits risks for operators through total solutions, partnerships and clear scenarios for the future.

"Of course, you have to remember that people had very different ideas two years ago," notes Johan Lange. "At that time, all the hot, new entrepreneurs were encouraging people to forget everything they knew and to make a fresh start. 'Building the new network,' was the rallying cry. All the new companies in the industry stood to gain if customers started from the beginning again. So what we were saying was actually something unique and marketable."

The marketing people at the Multi-Service Networks division enlisted an advertising agency whose assignment included finding a name.

"In early August 1999, I attended a presentation at the agency," recalls Johan Lange. "It was very impressive, and I immediately fell for the proposed name – Engine. The idea was that since we usually describe the global telecom network as the world's largest machine, it also needed an engine. In retrospect, the Engine concept also seemed like a natural extension of NGN."

Recently, Johan Lange once again met some of the people from the advertising agency who revealed how the name had been conceived.

"Just 20 minutes before I arrived, the people at the agency had absolutely no ideas. They has just decided to ask for more time when a copywriter stormed in and said 'What about Engine?' After working frantically for 15 minutes, they had thrown together a presentation with sketches and proposals for the values that would be associated with the name."

"With the Get Insp(w)ired road show, Ericsson demonstrated a brazenness that many visitors had been waiting for," says Caroline Tengstrand, who was the producer for Latin America. Show and dance were mixed with hard facts and a working network that clearly demonstrated the Engine concept. Photo: Lars Åström

FACTS/**ENGINE SOLUTIONS**

Engine is a concept for next-generation fixed networks. An Engine solution is a combination of circuit-switched and packet-switched products that enable an operator to build or migrate to a multi-service network. The product portfolio includes:

- Applications and platforms for application development
- Broadband access over copper and fixed wireless
- Backbone solutions based on IP, ATM and DWDM
- Communications solutions for voice, data and multimedia
- Services and Telecom Management

The level of innovation in creating the image was just as great as in creating the technical solutions

Göran Lindmark

The marketing people at Multi-Service Networks were enthusiastic, but the Engine concept needed to be anchored throughout the company. Many different units would be affected. The various products that would be included in the solution had been developed in different locations. Giving a marketing concept so much exposure was something new for an engineering company like Ericsson. The ambition to create a strong name for the concept was also controversial.

"I can certainly accept that Ericsson is the name we should project externally," says Johan Lange. "At that time, however, the Ericsson brand was so closely linked to mobile phones and mobility that we really needed a name of our own."

Mitch Lewis, marketing manager for the Multi-Service Networks division, was the one who was forced to shepherd the Engine concept through the skepticism and opposition that prevailed.

"Great obstinacy was required," he relates. "It probably would not have been possible if we had not already won a number of contracts that proved that this was something customers really wanted."

"At times, discussions were heated. Perhaps it was because Engine was a name about which everyone had an opinion. It quickly became personal," explains Mitch Lewis.

"One thing that I learned during this period is that you shouldn't try to reach decisions by e-mail, particularly not when feelings are involved. Meeting face-to-face is much better. It was a difficult period, but looking back two years later, I still feel good about it," continues Mitch Lewis.

A launch was planned on two occasions but stopped at the last minute. For those who had worked hard on the concept, this was very frustrating. One Friday, when they unexpectedly received notice that Engine was being canceled, one of Johan Lange's colleagues was so disappointed that he quit on the spot. By Monday, however, Engine was back on track, and it was time to make people sit up and take notice.

Turning point in 1999

This was not easy at first. The turning point came in 1999, when Kurt Hellström wrote about the concept in the Ericsson Annual Report. Engine then began to receive attention both internally and externally. Finding the right balance between technical facts and soft values was also important.

"You have to make sure that it's not all 'touchy-feely.' In our industry, the technical aspects are important," says Johan Lange.

When asked to describe why Engine was so successful, Johan Lange acknowledges the contributions of many. "Without the Data Backbone & Optical Networks division, it would not have been possible. They were the ones who developed much of the basic technology for the Engine solutions. The fact that Einar Lindqvist supported the concept so openly and fully was also important. Everyone who worked with customer contacts did a fantastic job," says Johan Lange.

Then there was Get Insp(w)ired, the traveling mini-show in which futuristic dances were combined with hard facts to present Ericsson in an entirely new light. A road show had already been planned for some time when Engine entered the picture, but the concept soon became the foundation for the show.

Caroline Tengstrand was the producer for the Latin American road show during the autumn of 2000.

"Many visitors said that it was refreshing to see Ericsson finally showing self-confidence. They had been waiting for such brazenness and were quick to point out that our competitors certainly aren't shy when it comes to beating their chests," recalls Caroline Tengstrand.

Caroline Tengstrand

In each location, a working network was set up so that visitors could see exactly how traffic was being transported.

"Sometimes we worked for three days straight to get the network up and running," continues Caroline Tengstrand. "But the result was very real and tangible for the audience. Even non-technical people understood what it was all about."

Naturally, however, Engine is not just a marketing vehicle.

"We had been working on the core characteristics of the Engine concept for years, but we never saw them as a single concept in the manner that they are presented in Engine," says Göran Lindmark, who was previously manager for the Voice over ATM unit where several of the products now included in Engine saw the light of day.

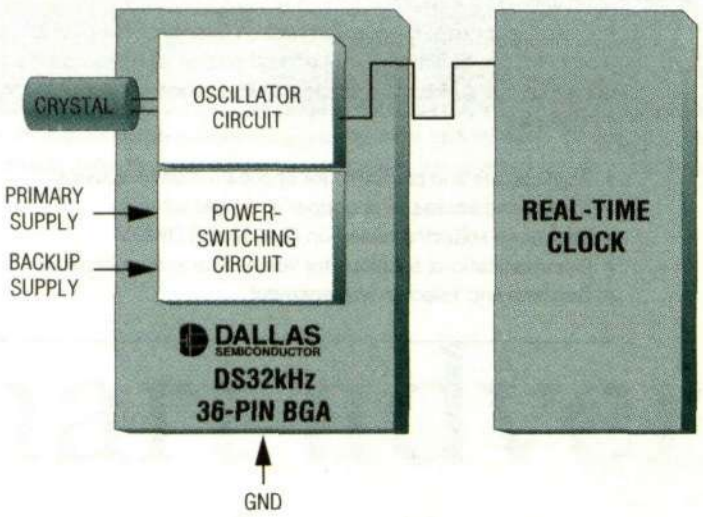
"Like many others, I was very skeptical towards Engine in the beginning. I thought the concept was very vague. But it quickly became more concrete. Looking back, I am convinced that our products would never have been as successful without Engine. I believe that the level of innovation in creating the image was just as great as in creating the technical solutions."

Maria Paues
maria@pauesmedia.se

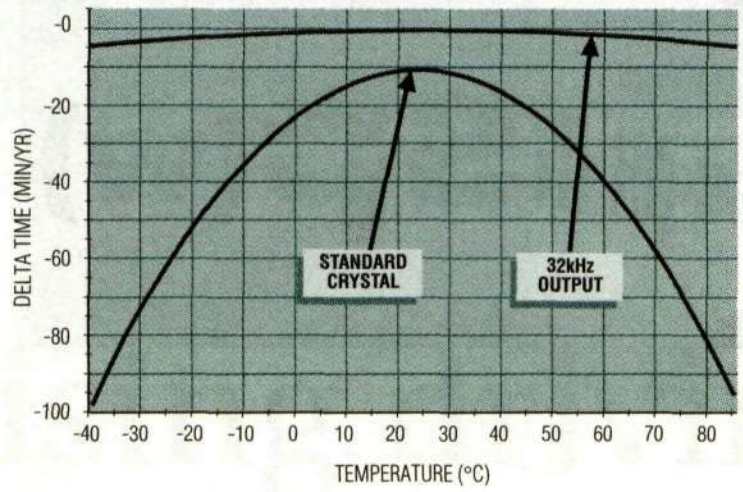
WORLD'S MOST ACCURATE 32.768kHz RTC SOURCE

Accuracy ±1 Minute/Year ±2ppm

The DS32kHz TCXO module offers advantages such as fast design time with guaranteed performance. The module construction reduces part count and facilitates calibration with the embedded crystal prior to shipping. The DS32kHz CMOS square wave output signal is guaranteed at ±1 minute/year across temperature (0°C to +40°C) and can be continuously sourced when primary power is interrupted. At $3.50, the DS32kHz is a low-cost input to an RTC (real-time clock), providing for the most accurate 32.768kHz clock signal possible!



DELTA TIME vs. TEMPERATURE



- **No Calibration Required**
- **+2.7V to +5.5V Operation**
- **UL-Recognized (File Number E99151)**
- **Square Wave Output is Active During Power Interruptions**
- **Accurate to ±2ppm ⇒ ±1minute/year (0°C to +40°C)**
- **Accurate to ±7.5ppm ⇒ ±4 minutes/year (-40°C to +85°C)**
- **36-Pin BGA (400mil x 450mil)**

FREE* Real-Time Clocks Design Guide—*Sent Within 24 Hours!

Includes: Reply Cards for Free Samples and Data Sheets

Call for a Design Guide or Free Sample

UK (44) 118 933388 Toll-Free in the U.S. 1-800-998-8800

DALLAS SEMICONDUCTOR MAXIM

www.maxim-ic.com

FREE FULL-LINE DATA CATALOG ON CD-ROM

Get Price, Delivery, and Place Orders Online at www.maxim-ic.com

Distributed by Maxim/Dallas Direct!, Arrow, Avnet Electronics Marketing, Digi-Key and Newark.
Distributed in Canada by Arrow, and Avnet Electronics Marketing.

International Distributors: Austria: (43) 16 10620 / (43) 18 9576 2654 • **Belgium:** (32) 3458 3033 • **Bulgaria:** (35) 9277 4596 • ***Croatia/Bosnia-Herzegovina:*** (38) 51 2339 948 • **Czech Republic:** (42) 02 6631 3053 • **Denmark:** (45) 86 8165 22 • **Finland:** (35) 89 3508 880 • **France:** (33) 14 9652 690 / (33) 16 4472 594 • **Germany:** (49) 89 6110 8158 / (49) 40 2410 72 • **Great Britain:** (44) 12 9633 0061 / (44) 24 7643 7400 (44) 14 8081 2806 • **Greece:** (30) 18 8109 48 • **Hungary:** (36) 13 3952 19 • **Ireland:** (44) 14 8081 2806 / (35) 36 1411 842 • **Israel:** (97) 23 6965 231 • **Italy:** (39) 03 6249 61 / (39) 26 6092 1 /(39) 02 612 98 671 ï **Lithuania/Latvia/Estonia:** (37) 2600 8977 • **The Netherlands:** (31) 10 2882 500 • **Norway:** (47) 66 7765 00 • **Poland:** (48) 22 6295 758 / (48) 22 6380 900 • **Portugal:** (35) 12 1472 5190 • **Russia:** (7) 81 2553 7144 / (7) 09 5192 5538 • **Slovakia:** (421) 844 222 592 • **South Africa:** (27) 11 452 0706 • **Spain:** (34) 91 4861 270 / (34) 93 5821 991 / (34) 91 3727 200 / (34) 91 5305 004 • **Sweden:** (46) 85 0665 600 • **Switzerland:** (41) 13 0866 66 • **Turkey:** (90) 21 6346 9130 / (90) 23 2489 3363 • **The Ukraine:** (38) 04 4441 4051

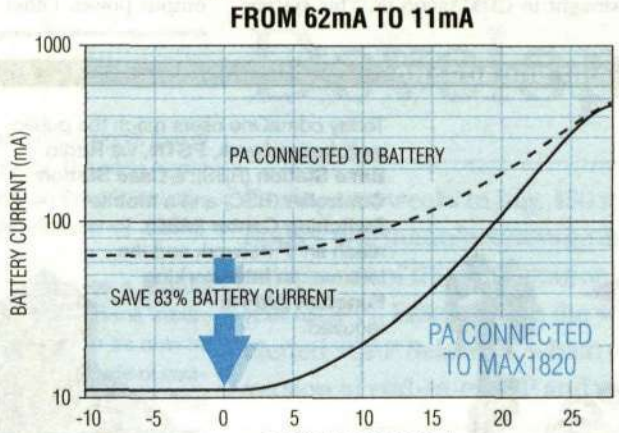
MAXIM is a registered trademark of Maxim Integrated Products, Inc. © 2001 Maxim Integrated Products.

REDUCE WCDMA PA CURRENT 83% WITH DYNAMICALLY CONTROLLED STEP-DOWN DC-DC

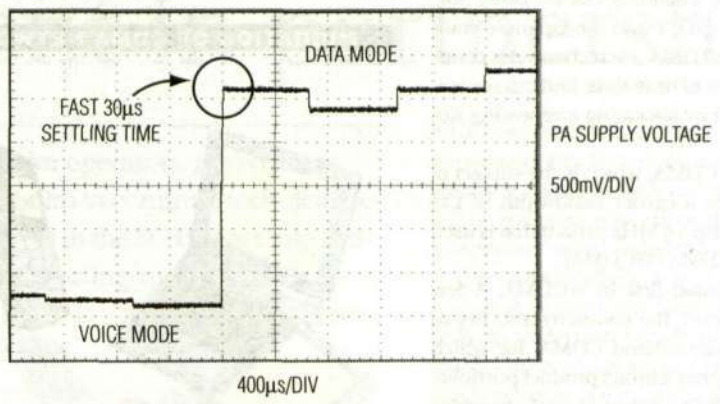
High-Speed DC-DC Adjusts 2.5G & 3G PA Supplies to Match Transmit Power

The MAX1820 is the first step-down converter designed specifically for the power amplifiers in 2.5G and 3G cellular phones. The baseband processor dynamically programs the converter output voltage based on the variable power required by the PA. The high-speed MAX1820 varies its output voltage from 0.4V to 3.4V in less than 30µs, tracking the PA transmit power envelope. By matching the PA supply voltage envelope, the PA minimizes power loss and maximizes battery life. The MAX1820 is equipped with a divide-by-13 or -18 phase-lock-loop to synchronize to a 2.5G or 3G system clock and does not add spurious noise into the RF band during actual tests with a WCDMA PA.

REDUCE BATTERY CURRENT FROM 62mA TO 11mA

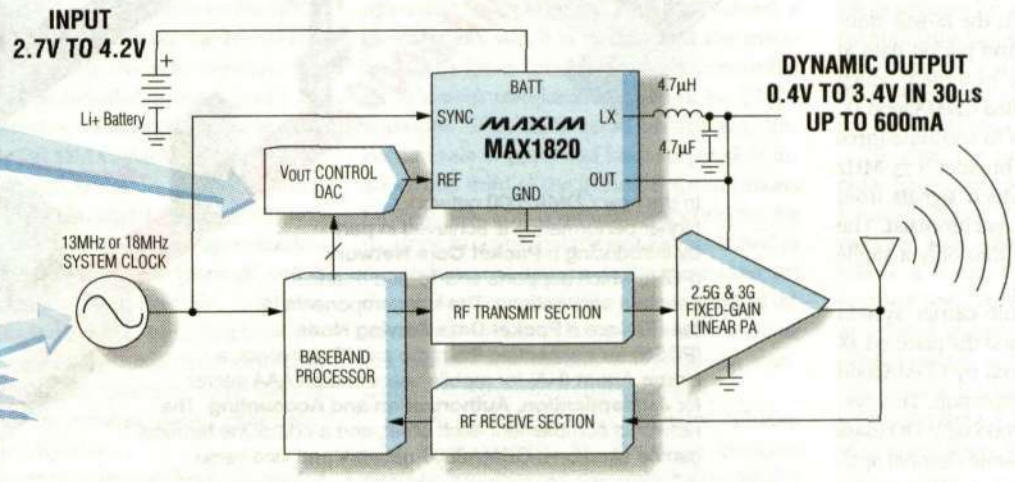


OUTPUT OF HIGH-SPEED DC-DC TRACKS PA POWER ENVELOPE WITHIN 30µs



ONLY SUPPLY WITH DAC INPUT FOR DIRECT COMMUNICATION FROM BB PROCESSOR

CLOCK SYNC REDUCES NOISE
MAX1820Z → No Sync
MAX1820Y → ÷ 18 PLL
MAX1820X* → ÷ 13 PLL



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

2001 EDITION!
FREE FULL-LINE DATA CATALOG ON CD-ROM

MAXIM
www.maxim-ic.com

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.

MAXIM is a registered trademark of Maxim Integrated Products. © 2001 Maxim Integrated Products.

CDMA moves to the new

The CDMA cellular standard is moving quickly toward the third generation with mobile Internet and higher data speeds. Demonstrated most recently was a new version called CDMA2000 1xEV-DO, which is optimized for data and will allow mobile networks to be enhanced with wireless LAN (WLAN) technology.

➤ The CDMA standard, which has long lived in the shadow of the global standards GSM and TDMA, has become increasingly popular lately and is now used by 62 operators in 43 countries. The strongest support is found in Asia and North and South America.

CDMA, which stands for Code Division Multiple Access, uses a radio network that combines a number of calls on a shared frequency channel by assigning a unique code to each one. This is in contrast to TDMA (Time Division Multiple Access), which is the technology used in virtually all other second-generation cellular systems, including GSM, TDMA (formerly DAMPS), DECT and the Japanese standard PDC. With TDMA, each channel is divided into a number of time slots, and call separation is achieved by allocating a repeating slot for each one.

Narrowband CDMA, which is the subject of this article, uses a carrier bandwidth of 1.25 MHz. There is also a 5 MHz variant that is used for Wideband CDMA (WCDMA).

Ericsson invested first in WCDMA. A few years ago, however, the company also began working with narrowband CDMA, for which Ericsson already has a broad product portfolio.

The first CDMA system, which provides similar services to GSM, is called cdmaOne. Version 2, which is based on the IS-95B standard, supports voice calls and packet data at speeds up to 64 kbps. The next step, which starts the move to 3G, is called CDMA2000 1X. Originally, there were plans to combine three 1.25 MHz channels into a broader 3.75 MHz multi-carrier channel in which signals from the base station would be synchronized. The designation 1X thus meant that only a single channel would still be used.

Development of the multi-carrier system was put on hold, however, and the planned 3X system is thus being replaced by CDMA2000 1xEV, where EV stands for evolution. This system will evolve into CDMA2000 1xEV-DO (data only), which will have a separate channel optimized for data traffic offering 2.4 Mbps on the downlink to the mobile phone and 153.6 kbps on the uplink. Designed to support such services as streaming sound and video, this system should be out on the market next year. The 1X system now available supports voice and packet data in the core network, while the 1xEV system will deliver true broadband with speeds up to 2 Mbps. Sometime thereafter, plans call for a 1xEV-DV (data and voice) system with a common channel for real-time data and voice (Voice-over-IP) with even greater speeds.

Smooth transition

"CDMA is established in the market, and we now see Mobile Internet as the engine that will drive its growth," say Colleen Wade and Bo Maurin, who work with CDMA marketing at Ericsson's offices in San Diego, California, in the US.

"Today we have a complete portfolio of services for Mobile Internet that supplements our CDMA infrastructure offering. We are particularly strong in messaging, but also in mobile commerce, an area in which our competitors in infrastructure sales have not yet made a strong showing. In addition, we have considerable expertise within our marketing units with respect to location-based services. These three areas currently comprise the core of our Mobile Internet offering," continue Colleen Wade and Bo Maurin.

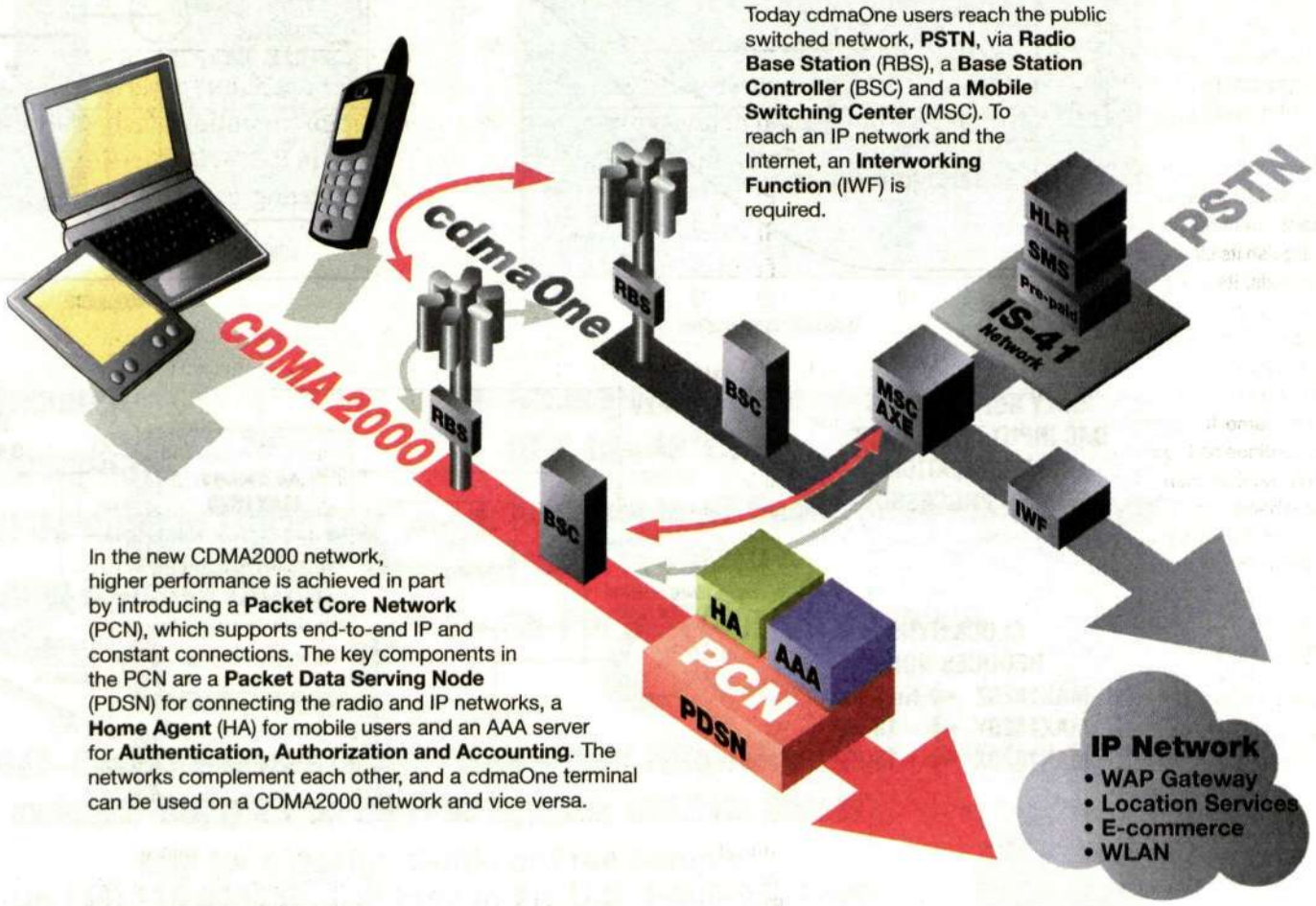
Ericsson currently holds a seven-percent share of the CDMA market, but the goal is to capture 15 to 20 percent by 2004. The major competitors are Lucent, Nortel, Motorola and Samsung. Ericsson has elected not to invest in the transitory IS-95B system, but rather to move straight to CDMA2000 1X. This system can be implemented on both 800 and 1900 MHz, as well as the 2 GHz band. Thanks to a well-conceived design, the transition to the 3G version will be smooth for operators. For Ericsson customers, the transition can be accomplished through a remote upgrade of the BSC (base station controller) software and the addition of a transceiver card in the base stations. CDMA2000 1X can either be built on top of an existing cdmaOne network, in which case capacity is doubled, or deployed as a separate network.

CDMA's strengths

Ericsson's CDMA2000 system consists of a mobile switching center (MSC), which is based on the new AXE 810, the BSC 1120, which controls radio traffic between the base stations, and the RBS 1127 Radio Base Station.

This is a macro base station that can also be configured as a micro base station with high output power. Other important components

MIGRATION OF CDMA NETWORKS TO 3G AND BROADBAND



Today cdmaOne users reach the public switched network, **PSTN**, via **Radio Base Station** (RBS), a **Base Station Controller** (BSC) and a **Mobile Switching Center** (MSC). To reach an IP network and the Internet, an **Interworking Function** (IWF) is required.

In the new CDMA2000 network, higher performance is achieved in part by introducing a **Packet Core Network** (PCN), which supports end-to-end IP and constant connections. The key components in the PCN are a **Packet Data Serving Node** (PDSN) for connecting the radio and IP networks, a **Home Agent** (HA) for mobile users and an AAA server for **Authentication, Authorization and Accounting**. The networks complement each other, and a cdmaOne terminal can be used on a CDMA2000 network and vice versa.

Graphics: Martin Gradén

AXE Enabler – a path to Engine

The AXE operators who have not yet made the transition to Ericsson's multi-service solution, Engine, will now be able to upgrade their existing networks while at the same time preparing themselves to migrate quickly to broadband and packet data. AXE Enabler is the new product that makes this possible.

➤ Circuit-switched telephony and AXE are still very much alive. AXE remains unsurpassed for voice traffic, and even though Engine is a success, not all customers are ready to make the change to a packet-switched network. A very large number of operators thus need to continue maintaining and upgrading their AXE networks so that they remain cost-effective while increasing capacity and availability.

"The solution we offer is called AXE Enabler," says Henrik Bäckström, who is responsible for circuit-switched switching systems. "This is a new AXE release that replaces traditional AXE releases that we previously called AXE Local 7.2, AXE TransGate 5.2 and AXE TransLocal 4.2."

Henrik Bäckström

AXE Enabler will allow operators to gradually improve their AXE networks while at the same time enabling them to move to Engine Integral, which is a full-scale Engine solution for the local and transit levels that opens the door to an all-IP world.

All of the roads

"All roads lead to Engine," as the saying goes at Ericsson. Some 60 customers have already selected Engine, but a large base of customers remain who have not yet made a choice.

These operators have two basic alternatives. One is to continue developing their AXE networks in preparation for a migration to Integral.

The other is to build a completely new packet-switched network in parallel with their AXE network. AXE Enabler can accommodate both alternatives.

Best platform on the market

Operators who invest in AXE Enabler can either upgrade the system software or, if they want to upgrade the network, buy new stations for which they should choose AXE 810, which is the best platform on the market.

"During the autumn of 2001, we will be able to launch AXE Enabler, and the first release will be ready during the first quarter of next year," concludes Henrik Bäckström.

Lars Cederquist

dmn.ericsson.se/axe

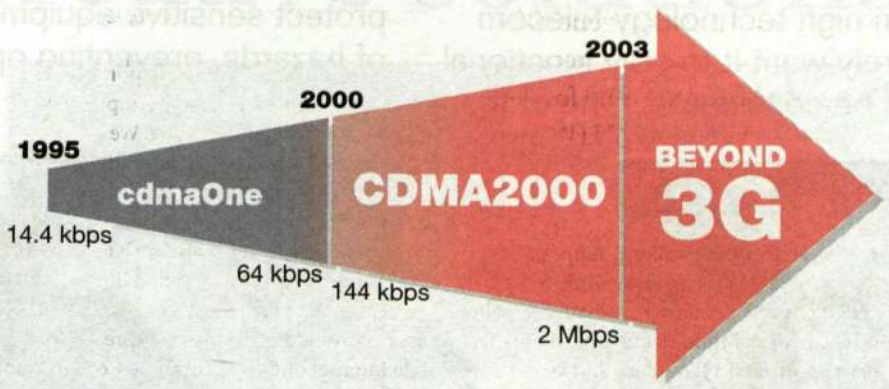
generation

are a Mobile IP-based core network for packet data and a service network for service development. Many components in this system are being re-used from Ericsson's WCDMA system.

At one time, TDMA and CDMA were the contenders to become the radio access solution for 3G networks. Today 3G development is proceeding along several tracks, which include GSM/Edge and WCDMA within the 3GPP industry consortium and CDMA in 3GPP2. CDMA has several strengths that make it a formidable competitor. An important feature of Ericsson's CDMA2000 1X system is an open core network for packet data called the Packet Core Network (PCN), which makes it possible to create end-to-end IP connections across the entire network.

Delivery of Ericsson's CDMA2000 1X system will begin in late 2001 or early 2002. The only part of the system currently available is the PCN, but in early autumn, the MSC will be released, followed by the radio network. In October, Ericsson will have tri-mode phones that can be used on all three frequencies and which include support for Bluetooth, WAP and other features. There are already nearly a dozen phone manufacturers offering products that support speeds in excess of 144 kbps.

The first CDMA system, which provides similar services to GSM, is called cdmaOne. Version 2, based on the IS-95B standard, supports voice calls and packet data at speeds up to 64 kbps. This system is currently deployed in a number of markets. The next step, which will be the move to 3G, is called CDMA2000.



Lars Cederquist
lars.cederquist@lme.ericsson.se

FACTS/CDMA HISTORY

In 1999, Ericsson acquired the infrastructure division of Qualcomm, which was the leading CDMA developer.

The first CDMA system was installed in 1995 in Hong Kong, but it took about four years before it started to take off.

Ericsson's most recent contract was an order from China valued at about USD 200 million for a complete cdmaOne system for China Unicom.

Just over a year ago, Ericsson, together with third-party suppliers, opened a CDMA Solutions Center for customer demonstrations and application development.

FACTS/CDMA CODING

CDMA coding is based on a code signal that is overlaid on a carrier frequency. The code signal changes 100 times faster than the original signal, thus creating a higher-frequency broadband signal.

Each call or connection receives a unique code, which is added to each bit in the transmission. In order for the receiver to be able to distinguish its signal from the multitude of coded signals, its code is added once again. The result is that the code signal is removed from the call, thus recreating the original narrowband signal.

All other calls, however, which are combined on the same frequency band, are unaffected and continue as broadband signals.

The receiver then uses a filter to extract the narrowband signal, which is now amplified 100 times, and thus decodes the call. Other calls remain in the background as noise.

This means the greater the number of calls, the more noise, which also determines the limit for the number of simultaneous calls in a cell.

In a CDMA system, the same frequency is used for all cells, meaning that frequency planning of the type required for GSM is unnecessary.

ericsson.com/review

cdg.org

ericsson.com/cdmasystems

Development in partnership

During two weeks in July, 450 representatives for operators, government bodies and manufacturers gathered in Stockholm to continue technical development of third-generation mobile networks in the 3G Partnership Project (3GPP). Ericsson was the sole host for the meeting, at which work included 3GPP Release 5, which will be ready next March and offer the first version of end-to-end IP and mobile multimedia.

➤ The Third Generation Partnership Project (3GPP) has played a decisive role in the development of the 3G networks called UMTS, which use WCDMA for the radio network. The organization was founded in 1998, partly on Ericsson's initiative, to harmonize the various proposals for WCDMA systems from Europe, Japan, the US and Korea. In mid-1999, China also joined 3GPP. In March 2000, 3GPP was able to present a complete global specification for a WCDMA radio access network and a backbone network based on GSM. Last year, Ericsson also succeeded in including GSM development in 3GPP, which will make it easier to provide a single user interface, regardless of whether users are communicating over GSM, GPRS/Edge or WCDMA.

3GPP does not develop standards. Instead, it creates technical specifications, which are then approved as standards by such standards bodies as ETSI in Europe, ARIB and TTC in Japan, T1 in the US, TTA in Korea and CWTS in China.

"The work is organized so that those who are interested in a particular issue can submit a contribution, which is discussed at the meetings," says Jonas Sundborg, who is responsible for Ericsson's standardization work for UMTS and GSM. "Thus far, Ericsson has played an important role in 3GPP and been responsible for about one third of the technical specifications for WCDMA. This is naturally very positive for us, since it means that the systems are suited to our technical platforms. At the same time, we do not want to standardize all our technical innovations, but instead want to be able to make Ericsson-specific additions outside the standard to increase our competitiveness."

In his opening speech, Torbjörn Nilsson, who is responsible for Ericsson's business strategy, emphasized the importance of the work now in progress within 3GPP.

"We are facing the greatest change in the history of telecommunications. The industry is moving from circuit to packet switching, from narrowband to broadband, and from 2G to 3G. All of this is happening at once, and all parts of the network are affected. We must therefore develop the right standards and not forget that it will be end users who will be the judges of our 3G systems," noted Torbjörn Nilsson.

The CDMA cellular standard has a corresponding organization called 3GPP2, which is working to develop specifications for the migration from cdmaOne to CDMA2000. Ericsson is active in 3GPP2 and is trying to coordinate the standards as far as reasonably possible in order to be able to use the same technical platforms for both networks.

In October, a 3GPP Future Evolution Workshop will be held, at which participants will discuss what will follow after IP and multimedia.

"To date, the major technical advances in radio have come at ten-year intervals," notes Jonas Sundborg. "At this point, however, we are working with smaller, incremental improvements. It is very difficult to predict what will succeed. SMS, for example, was long regarded as a failed technical experiment until it suddenly took off with full force. Future releases will include WLAN access and very high data speeds for the WCDMA downlink in the order of 10 to 20 Mbps," concludes Johan Sundborg.

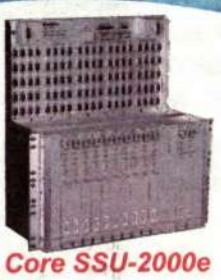
Lars Cederquist

www.3gpp.org

www.ieft.org

Powerful Network Synchronization Solutions

1010101010ERROR10101010101DELAY010101LOSS10110


Core SSU-2000e

Access OT-21
ETSI Series

Datum's **NetSync^{Plus}® Core SSU-2000e** and **Access OT-21 Series** are intelligent, high-performance synchronization equipment that ensure "error-free" quality of service (QoS) such as delay, data loss and frozen video. Designed in a compact ETSI-compliant package with GPS functionality inside, they can be seamlessly integrated into **Ericsson's AXE-10** multiservice switching systems to offer a total carrier-class solution at the best price/performance ratio. For more information, contact us or visit our web site today.

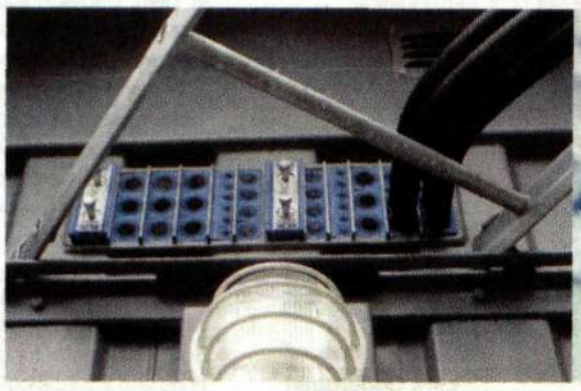
Contact us to get your NetSync^{Plus} planning guide today!

010RETRANSMIT001010DROPPED CALL00101FROZEN VIDEO01010

Austin, Texas • ++1.949.598.7543 • sales.international@datum.com • www.datum.com datum

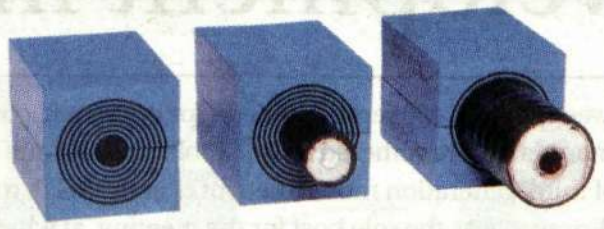
The next generation of cable entry seals

No system is stronger than its weakest link. When you invest in high technology telecom equipment you surely want it to stay functional. Every detail has to be considered. One of them should be cable entry seals from Roxtec. They protect sensitive equipment from a wide range of hazards, preventing operational disturbance.



Field adaptability

Small or large cables, it does not matter. Roxtec's cable entry seals are adaptable in the field and can handle a variety of different wires and antenna feeders.

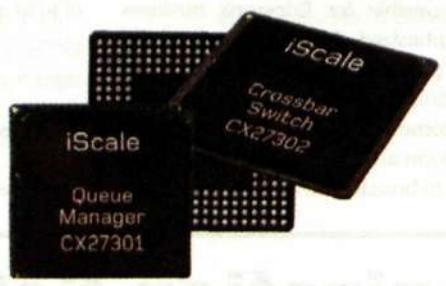


Roxtec International AB
Box 540, 371 23 Karlskrona, SWEDEN
PHONE +46.455.36 67 00, FAX +46.455.820 12
EMAIL info@roxtec.se, www.roxtec.se

Roxtec

MINDSPEED

LEADERSHIP TECHNOLOGIES



Switch Fabric chip set for STM-16/64

Mindspeed Technologies provides one of the industry's most comprehensive portfolios of communications solutions. Our integrated circuits, chipsets and software offer complete solutions for aggregation, transmission and switching of data, video and voice from the edge of the network to the optical backbone.

- G.shdsl CO and CPE Broadband Modems
- Network Processors
- 10Gbps Short Reach Optical Transceiver
- Multi Protocol Label Switching Software
- 136x137 Optical Cross Point Switch
- Resilient Packet Ring Processing
- ATM/POS PHYs from STM-1 to STM-64
- Multiservice Access Processors

www.mindspeed.com

MINDSPEED TECHNOLOGIES BUILD IT FIRST

Stockholm University's Executive MBA program

... real choices for serious professionals

- Intensive and part-time options
- English and Swedish alternatives
- Wide range of flexible modules
- Specialist options

Enrolling now for January 2002

Entry requirements
– bachelors degree (120 credit points) or equivalent
– minimum 3 years professional experience
– company sponsorship

Contact
Eva Carnestedt on 08-674 74 25, email ec@fek.su.se or Anne Pihl on 08-16 38 87, email api@fek.su.se
for more information or see our website www.fek.su.se for details of our Executive MBA presentation evenings and on-line application.

With 40 years of experience in running management courses and 5 research institutes, Stockholm University's School of Business offers a range of courses that covers the entire business spectrum. Our Executive MBA Program enables you to apply theories directly to strategic projects in your company.

UNIVERSITET STOCKHOLMS

Efficiency Program triggers creative solutions

How do you remain visible when Marketing Communication budgets are being slashed? Mission impossible? Not to Ericsson Venezuela's creative team of executives.

Together with five applications development companies, Ericsson brought the concept of Mobile Internet to life at the Comexpo fair in Venezuela. Photo: Juan Diego Calderon

➤ After the Efficiency Program announcements, participating in Venezuela's most prestigious telecoms event Comexpo 2001 seemed to be out of the question. However, Ericsson Venezuela did not want to break a prior commitment with the tradeshow organizers, as this would send the wrong message to the market.

The solution to the dilemma came up during a long brainstorming session.

"The idea was to share the cost of the floor space with five local Mobile Internet application developers, and still make it an Ericsson stand," says Blas Jaimes, Internet Solutions Manager.

The result was beyond anyone's expectations. The developers bought the idea right away, and Ericsson's Mobility World Stand turned out to be one of the most visited stands of this trade show. "We hope that what we've done here in Venezuela may set an example to other markets that are struggling to find ways to be cost effective, and yet, keep working to position Ericsson as a key player in the Mobile Internet arena" says Blas Jaimes.

Silse Bloise
silse.bloise@edb.ericsson.se

Investing in the future

Nowadays investors don't just want to make money, they also want to have a clear conscience. This year's newly launched FTSE4Good Indices includes Ericsson on its lists of socially responsible companies.

Investment companies are showing an increasing interest when it comes to environmental and social responsibility, says Michele Schmidt.

➤ Human rights, social issues and environmental impact. These issues are being increasingly taken into consideration by investment companies. In response to this, FTSE, one of the world's leading global index providers, has designed an index for socially responsible investment. The criteria for being included in the FTSE4Good Index is based on companies' achievements in working towards environmental sustainability, developing positive relationships with stakeholders and upholding and supporting universal human rights.

This year, Ericsson was included on two lists, the FTSE4Good Global 100 Index and the FTSEGood Europe 50 Index. This means that Ericsson has been identified as a world leader in the establishment of socially responsible policies and practices.

Michele Schmidt, head of marketing and communications for sustainability and environmental issues at Ericsson has noticed an increasing interest from investment companies when it comes to environmental and social responsibility.

"In the UK, 78 percent of the Pension Funds are invested in 'socially responsible' corporations. And here at Ericsson we are being swamped with requests from investment analysts wishing to evaluate Ericsson to qualify our stock for ethical investment," she says.

All licensing revenues raised from the FTSE4Good tradable indices are donated to UNICEF, which is the official beneficiary of the index. To date, UNICEF has received USD 500 000 through FTSE activity.

Tonya Lilburn
tonya.lilburn@lme.ericsson.se

ERIC & SON

Savings rewarded in Australia

»» Ericsson in Australia has announced a "Cashflow Competition" where employees are invited to submit suggestions on how the company should improve its cashflow. An equivalent to USD 10 000 is in the prize pool. To be rewarded, a suggestion must have a positive impact on the cashflow before the end of the year, and should not result in any complaints from customers or suppliers. Last entry date is 10 September, and the finalists will be presented to Ericsson in Australia's managing director Karl-Henrik Sundstrom, who will make the final decision on which ideas will be implemented and how the reward will be distributed.

Mats H. Olsson, president of Ericsson in Indonesia cuts the ribbon.

Training center takes on new form

»» Ericsson in Indonesia has officially opened their Ericsson Knowledge Center. This is a development of Ericsson's training center that has been in operation since 1997. The main objectives of the knowledge center is for Ericsson to share its knowledge and technology with customers, employees and the Indonesian society in general.

"It is of strategic importance for Ericsson to not only supply equipment and transfer technology to society, but also to transfer knowledge and know-how to our customers and employees in Indonesia," said Mats H. Olsson, president of Ericsson in Indonesia.

Lynchburg efforts not wasted

»» Ericsson's facility in Lynchburg, US, recently received ISO 14001 environmental certification. The approval was granted based on environmentally friendly efforts on the part of Lynchburg employees, including waste recycling. The certificate was issued by the British Standards Institution, an international environmental organization.

Employee efforts resulted in a 1.2 million kilogram reduction in garbage in 2000.

New mobile master's degree

»» Students in Denmark will soon be able to obtain a master's degree in Mobile Internet communications. The idea came initially from Ib Byder, head of research and development at Ericsson in Denmark, when the education department was seeking recommendations for IT training programs. Start date for the new – and unique – program is set for February 2002.

"That is a good thing for both Ericsson and other people within the IT industry. Once I came up with the proposal, Nokia, Siemens and Motorola all wanted to lend their support," says Ib Byder.

The program will be available at the University of Ålborg and Denmark's Technical University.

No. 14,
September 6,
2001

contact

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

Lars-Olof Noren is not the sort of person who slows down his pace simply because he has retired. After having been involved in promoting technological developments at Ericsson for 40 years, he now plans to focus on his own projects: building a few houses, sailing and spending time with the grandchildren – to name just a few. Photo: Rolf Adlercreutz

Technology specialist continues to build

Already as a ten-year-old, Lars-Olof Noren was building simple communications systems. By the age of 12, he got his first summer job at Ericsson, and ever since the 1960s he has been involved in promoting technological developments within the company. He was instrumental in ensuring that AKE, the first computer controlled telephone switch, saw the light of day. Now, after 40 years of dedicated service, he is retiring.

➤ Lars-Olof Noren has always had a keen interest in technology. Following that first summer job at Ericsson, he went on to complete his degree project at the company, after which he has had a number of different jobs. Over the years, he has held several important positions, including technical director of the Enterprise business segment, which developed telephone switches and other products for companies. For many years, he has been a member of Jan Uddenfeldt's technology management group.

Of all the memories and experiences he has from 40 years at Ericsson, it will be the people that he will remember the most; mainly his colleagues, but also partners, customers and competitors. One of the clearest memories that Lars-Olof Noren has of important decisions is when Ericsson chose to focus its efforts on AXE telephone switches. In this case, he is glad that the advice and viewpoints of engineers weighed so heavily.

Bernt Ericson, head of Ericsson Foresight, has known Lars-Olof Noren as a colleague for thirty years.

"Very strong convictions"

"The most important contribution Lars-Olof made to the company is that he was the driving force behind the AKE system; the predecessor to the AXE switch. As a colleague and friend, he has definite opinions and very strong convictions. If you want to convince him of something, you need to have well-founded arguments", says Bernt Ericson.

Lars-Olof Noren retired on July 1, but this does not mean he's taking it easy. He'll just be doing other things.

Lives for the moment

"I'm planning to cut down trees, build a few houses, go sailing, skiing, read and spend time with my children and grandchildren. I didn't have much time for these activities before", says Lars-Olof Noren .

He seems to have a skill that few others have – to truly live for the moment. On the question of which position he thought was the most interesting, he answers without hesitation.

"The one that I had at the time", he says with a determined look.

Knowing that, it is not hard to foresee that Lars-Olof Noren will be able to enjoy life as a retiree.

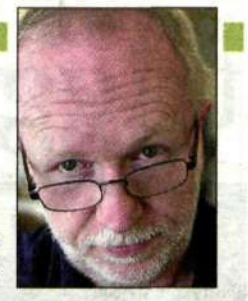
Ulrika Nybäck
ulrika.nyback@lme.ericsson.se

inside.ericsson.se/5minutes➤archive➤shows➤September 04

FACTS/LARS-OLOF NOREN'S CAREER

1961: began working at Ericsson
1961–1974: oversaw development of AKE switches
1976–1983: senior engineer and assistant technical director
1983: technical director of the Information Systems business segment (later Ericsson Enterprise)
1983–2001: member of technical management groups
1988–2001: technical advisor

COLUMN



Lars-Göran Hedin
corporate editor

Not much ado about a lot

➤ Here we go again. Under rather low-key circumstances, it was announced that the entire company is being reorganized. Included in that news was the naming of several important new managerial positions and other measures designed to make Ericsson even more efficient and customer-oriented. Important news that significantly impact how we work and yet it was hardly a media sensation.

Things used to be different…

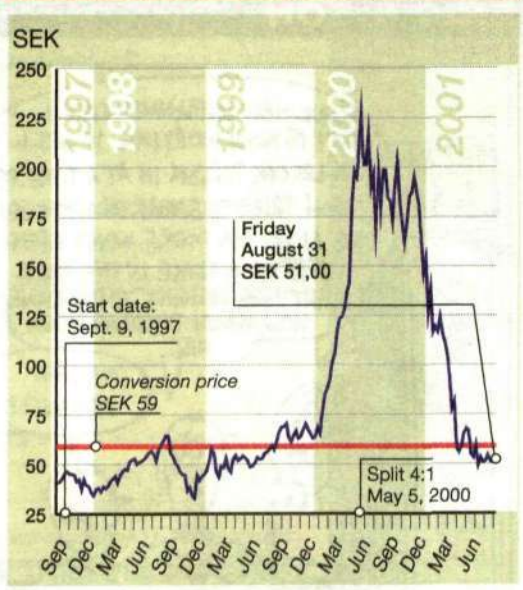
Over the past eleven years that I've worked at *Contact*, the magazine has been able to report on several major reorganizations. It is interesting to note how this kind of news draws less and less attention. Of course, it is a sign of the times that nowadays we take for granted that companies need to change in order to keep pace with developments occurring around them. And that the pace of reorganization is constantly being stepped up.

First and foremost, the rate at which organizational changes have been announced is increasing. The first one I experienced – Lars Ramqvist's introduction of the so-called matrix organization in 1990 – lasted nearly six years before it was time to redraw the organization chart. Three more years passed before Sven-Christer Nilsson introduced Business Segments and market areas (Kurt Hellström oversaw the effort to develop that structure). It then took just two years before it was time to rearrange the segments and market areas – turning five segments into six divisions. And now, just one year later, divisions are disappearing entirely and a few new, strong Business Units are making their entrance. The wheels of reorganization seem to be rolling ever faster.

Likewise, it can be noted that each time there has been a greater rush to implement the reorganization. In 1990, Lars Ramqvist gave the company five months to reorganize. In 1998, Sven-Christer Nilsson figured that "his" model would be up and running after just three months. And now it has been announced that the divisions will already be dissolved on September 1. In other words, the old organization will only have a couple of weeks to dissolve itself! That must be some kind of record for a company of Ericsson's size!

So, hang on to your hats my dear colleagues, next time around things might happen even more quickly!

THE ERICSSON B SHARE



For additional information, access the website:
http://inside.ericsson.se/convertibles