
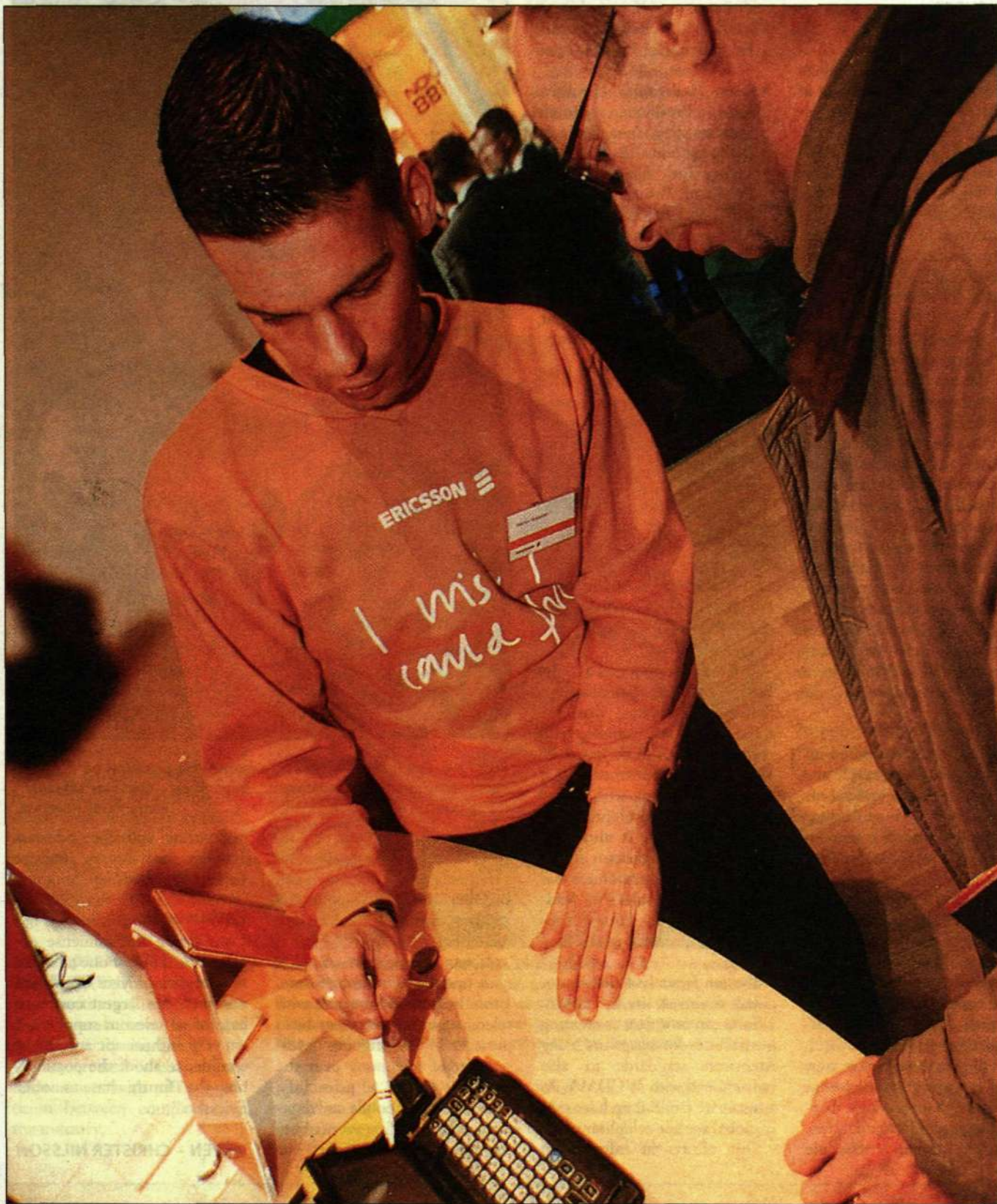


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ERICSSON  PUBLICATION FOR EMPLOYEES WORLDWIDE

No. 4 • 2 APRIL 1998



Good things come in small packages. Ericsson's handheld computer for mobile data communication, MC 16, is small but still attracts considerable attention. Photo: THORD ANDERSSON

Mini solutions at maxi fair

Products are becoming increasingly smaller and lighter. At CeBIT, Ericsson presented its compact products, such as the tiny handheld computer MC 16 and the new-generation AXE switch, which is much smaller than its predecessor. The dimensions of the fair, however, continue to grow. **Page 4**

Move being evaluated

Ericsson is continuing to evaluate the viability of moving its headquarters abroad. The company recently looked at properties in London. One of the motives behind a possible move is the prospect of attracting more non-Swedes to top positions.

Page 3

Business travel going down

The amount of business travel is declining in Infocom Systems. The decline can mainly be attributed to the business area's cost-savings program, Trim-98. **Page 5**

Rapid growth in China

China has become Ericsson's largest market in terms of orders booked. This is partially due to the country's rapid economic growth. **Pages 16-17**

Prepaid gaining ground

The market for prepaid mobile telephone cards is expanding worldwide. The system gives subscribers better cost control, while providing operators with a steady flow of revenue and lower administration costs. **Page 21**

VACANCIES SEE PAGES 28-31

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Sven-Christer Nilsson greets Ericsson employees

On Wednesday March 31st, Sven-Christer Nilsson officially took over as CEO of Ericsson. The same day he issued the following letter of greetings to all Ericsson employees.

"Dear Ericsson colleagues,

It is a great honor for me to assume the position of President and CEO of Ericsson.

When a new president takes over, there are many questions about what will happen in the company – questions involving the direction of operations and the organization. This is natural. Permit me to briefly present my plans for the immediate future.

We are better prepared than ever to meet the infocom market of the next decade with our combined expertise. An important task is to safeguard continuity in development. Our overall strategy – Wanted Position Year 2000 – has been established. We will continue the transformation of Ericsson from being mainly a manufacturing company to primarily a knowledge-based enterprise.

Our position of strength will be further developed with the successive changes which are required for leadership in a rapidly shifting world.

Technology leader

The strong future-oriented investments within research and development begun under Lars Ramqvist will continue. It is my intention that we will retain our position as the technology leader in our industry.

Since being appointed to this position, I have had meetings with most of the business units in Sweden. The months immediately ahead will involve an intensive travel schedule for contacts with customers and colleagues throughout the world. This will give me a better view of what is required in the future with regard to technology, market strategies and organization. Thereafter, I intend to schedule

a large manager meeting in the beginning of October, where I will report my conclusions from the contacts I have had.

Corporate executive team

I will be working with a corporate executive team which, in addition to myself, includes:

- Carl Wilhelm Ros, Senior Executive Vice President and Chief Financial Officer.
- Kurt Hellström, Executive Vice President, Mobile Systems, President, Ericsson Radio Systems AB.
- Anders Igel, Executive Vice President, Infocom Systems. President, Ericsson Telecom AB and Ericsson Business Networks AB.
- Johan Siberg, Executive Vice President, Mobile Phones and Terminals. President, Ericsson Mobile Communications AB.
- Britt Reigo, Senior Vice President, Corporate Human Resources and Organization.
- Lars A Stålberg, Senior Vice President, Corporate Relations.

We will meet regularly to jointly deal with matters concerning Ericsson as a whole.

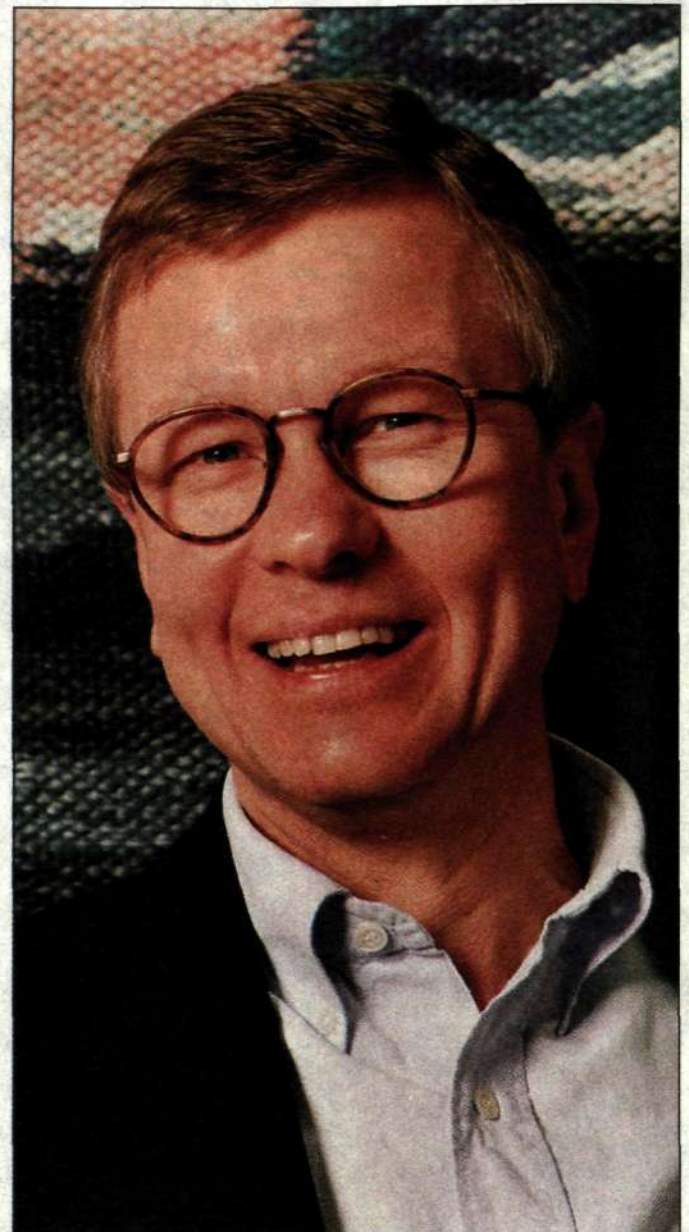
Listening to customers

I would like to provide a few comments now regarding the immediate future.

The decision of ETSI, the European Telecommunications Standards Institute, that the third-generation mobile telecom standard will be based on WCDMA, confirmed that Ericsson is leading with regard to technology development in the mobile area. It also confirmed that our constant efforts to listen to our customers has again yielded results – all leading operators in Europe supported our proposal in the final voting.

Earlier, Japan had already decided to invest in WCDMA. Efforts can now turn to creating possibilities for operators using American standards to also move ahead with WCDMA. As a result we could then have truly global mobile telephony.

Our efforts in infocom in



"It is a great honor for me to assume the position of President and CEO of Ericsson", says Sven - Christer Nilsson

Photo: PETER NORDAHL

fixed networks today includes everything from traditional switches to datacom and Internet services, voice over the Internet and new transmission technologies.

A new generation of AXE with open system architecture, a totally new ATM switch with telecom performance has been presented. The ongoing development of telephony over the Internet offers a possibility, with our fixed, mobile and datacom solutions, to contribute strongly to ensuring that our

customers will be winners among the future Internet Service Providers.

Enthusiastic

Considering the immense expertise held by our one hundred thousand employees worldwide and with the largest customer base of all telecom suppliers, I am very enthusiastic and full of confidence about the possibilities the future has to offer Ericsson."

SVEN - CHRISTER NILSSON

Ramqvist elected chairman of the board

■ The Annual General Meeting of Telefonaktiebolaget LM Ericsson was held on Monday March 30, in Stockholm

The Company's and the group's income statements and balance sheets were adopted and the Board of Directors and the President were discharged from liability for the fiscal year 1997.

The Meeting approved a dividend of SEK 3.50 per share,

a raise of 40 percent. Shareholders who are recorded in the share register on the record date, April 2, 1998, are entitled to receive dividend, which is expected to be paid on April 9, 1998.

The Meeting also approved a bonus issue, whereby one new A- and B-share will be received for each old A- and B-share, respectively. The record day for the bonus issue is May 27, 1998. The Meeting also de-

clined to change the Articles of Association whereby the capital stock amount limits are changed to minimum SEK 2,000m. and maximum SEK 8,000m.

The following Directors of the Board were re-elected; Bo Berggren, Tom Hedelius, Sverker Martin-Löf, Lars-Eric Petersson, Lars Ramqvist, Clas Reuterskiöld, Peter Sutherland, Marcus Wallenberg and Sven Ågrup. Björn Svedberg

had declined re-election. Sven Christer Nilsson was elected new director of the Board.

At the statutory meeting of the Board of Directors following the Annual General Meeting, Lars Ramqvist was elected Chairman. Tom Hedelius and Marcus Wallenberg were elected Vice Chairmen.

Carl-Eric Bohlin, Olof Herolf and Tomas Thies were re-elected to serve as auditors.

Relocation still a possibility

Ericsson is continuing to evaluate the prospects of moving its corporate leadership functions outside Sweden. The matter has been examined for the past year and was initiated by Ericsson's Board of Directors. London is one of the most likely locations, where the company was recently looking at properties.

"This does not mean that we are close to reaching a decision on the issue. If we decide to lease these properties, they

could very well be used by Ericsson's British company instead, which is also in need of office space in central London," says Lars A. Stålberg, Senior Vice President—Corporate Relations at Ericsson.

Started a year ago

It was one year ago that the Board of Directors assigned the executive management the task of evaluating which locations would be beneficial for relocation of Ericsson's headquarters.

The background for this request is that 96 percent of Ericsson's sales are outside Sweden and that the company needs to be closer to its customers and markets.

It is particularly important to broaden the recruitment base for top management personnel in the company.

Ericsson would like to recruit more non-Swedes to executive positions, but it has proven difficult to attract candidates for jobs located in Sweden.

This is due to language difficulties and salary levels after tax, among other factors.

Total overview

One of the arguments for a move to, for example, London, is that it would ensure that Ericsson's entire operations receive their fair share of attention.

An increasing proportion of employees, customers and shareholders are located outside Sweden.

At present, there is a risk that executive management spends a disproportionate amount of time on Swedish operations.

Continues in Sweden

Regardless of what is decided on this issue, Ericsson's legal seat will remain in Sweden and the company will continue to pay its corporate tax there. Sweden is also the country where Ericsson conducts most of its development work and production.

MIA WIDELL ÖRNUNG

Customers demand total solutions

Customers are no longer interested in technology per se, but instead want ready-made telecommunications solutions. That is why Ericsson in Australia founded Ericsson Services, which seeks to provide total communications solutions. This is a pilot project in which the same Ericsson company is helping customers in all areas – enterprise networks, mobile telephone systems and fixed networks.

The fast pace of development in information technology together with deregulation of the Australian telecom market has created great pressure on everyone involved. Deregulation began in 1992 and continued up until July 1997.

New operators

The PTT Telstra then sold a large portion of its operations and several new operators moved into the market.

This created a challenging environment with stiff competition between companies in the industry.



A new unit, Ericsson Services in Australia, will serve customer's needs in several areas: enterprise networks, mobile telephone systems and fixed networks. David Arkles is the manager of the new unit. Board members Kaj Snellman, Åke Enell and Bert Norberg are in the background.

In order to handle the new requirements of the market, Ericsson Australia (EPA) estab-

lished the Ericsson Services business unit in 1997. This unit offers total communications

solutions to improve customers' current processes and systems.

"The trend that we see today is that customers demand functions instead of products and they are only slightly interested in the technical solution," says Bert Nordberg, service manager at the Enterprise Networks business unit in Stockholm. According to David Arkles, manager of Ericsson Services in Australia, an integration of communication and technology has taken place, partially through the combination of data, voice and multimedia.

Important to incorporate

"In connection with this trend, it will become incredibly important for our customers to incorporate the skills that Ericsson Services has to offer into the solutions they choose for the future."

During 1997, Ericsson Services accounted for approximately 12 percent of Ericsson Australia's total sales. The goal is for that number to climb to 35 percent by the year 2002. That would make Ericsson one of the five largest information technology and telecom service companies in Australia.

SANDRA WIDH

news briefs

Ericsson buys Fujitsu plant

■ On April 1, the Mobile Systems business area will take over Fujitsu ICL Personal Computers' research and development plant in Linköping, Sweden. All of the more than 100 employees have been offered new employment with Mobile Systems and 87 have accepted.

"The situation is very advantageous. We will have access to a large number of well-educated employees who complement our own areas of expertise," says Ulf Mimer, who will be in charge of operations.

Huge order from Mannesmann

■ Ericsson has been commissioned to expand Mannesmann Mobilfunk's existing mobile network. The order is worth more than SEK 1.3 billion (USD 165 million). Ericsson is the main supplier to Mannesmann, one of the world's leading mobile telephony operators.

WCDMA pilot system to Japan

■ Ericsson has now completed delivery of the third-generation mobile telephony system to the Japanese operator, NTT DoCoMo. The system is based on WCDMA technology. Earlier this year, the European standardization body, ETSI, decided that WCDMA would be the European standard. With support from other countries worldwide, there is a possibility that the Ericsson-backed technology will become a world standard.

United Arab Emirates buys GSM

■ Etisalat, an operator in the United Arab Emirates, will purchase a GSM 900 network from Ericsson for SEK 480 million (USD 60 million). The contract is for an expansion of the existing network that was supplied by Ericsson and made operational in 1996.

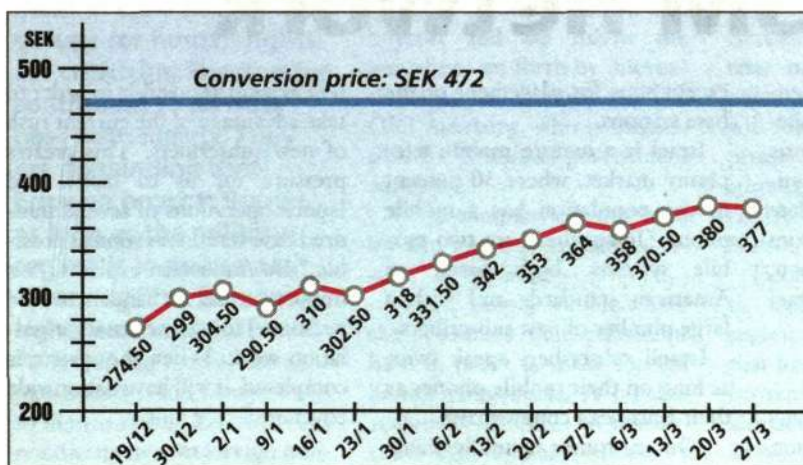
Ericsson sells GSM to Serbia

■ Ericsson will expand the Serbian GSM 900 network in the Republic of Yugoslavia. The contract is worth USD 60 million. The contract also includes Ericsson's Prepaid Light system, which allows the mobile user to pay for calling time in advance.

Ericsson number one in IN services

■ Ericsson is the best-known company and the most frequently purchased brand when it comes to intelligent network services and products, so-called IN services. This is according to the results of a survey carried out by the telecom magazine Communications Week and commissioned by Ericsson. Siemens and Alcatel tied for second place. The survey was carried out among 800 operators worldwide. Operators are increasingly making investments in personal services.

Share prices week by week in Contact



■ Ericsson's stock market valuation has indirect effects on all employees of the company. Now that nearly 50 percent of employees in Sweden and many worldwide have a chance to become shareholders in the company through the convertible issue, Contact believes interest in the price of Ericsson shares will increase.

On September 9, 1997, an extraordinary meeting of shareholders approved a proposal to issue convertible debentures to employees in Sweden. The conversion price was fixed later at SEK 472 per share (see diagram). Contact shows share price trends in every edition of the publication. The share price quoted will be the Friday closing sale price for Ericsson's B-shares at the Stockholm stock exchange.

The conversion period extends through June 30, 2003.

CeBIT – an IT and telecom phenomenon

The CeBIT fair in Hannover is the world's largest data and telecom fair. When it is all over on March 25, it is estimated that more than 600,000 visitors will have seen what 7,200 exhibitors have had on display. Hannover will undoubtedly have been a worldwide Mecca for all aficionados of IT.

German exhibitors predominate, but the international influence is clear. U.S. companies have long had the largest representation, after Germany. This year, it looks as though Taiwan may capture first place, but at the moment it is unclear how the economic crisis in Southeast Asia has affected the Taiwanese exhibitors.

It's difficult to avoid mentioning figures where CeBIT is concerned. This year's CeBIT, the



With 7,200 exhibitors at CeBIT, it's essential to stand out in a crowd. Ericsson attracted visitors with the help of jugglers.

thirteenth, is larger than last year's. Of the 360,000 square meters of floor space, software companies are most prevalent with 2,515 stands. They are followed by IT, with 1,608 stands, and telecom with 832. It is, however, becoming increasingly

difficult to discern one from the other. Several exhibitors, including Ericsson, have several stands focusing on different aspects.

Within Ericsson, there is a lot of talk about CeBIT, especially this time of year, but few know

what it stands for. It is a German acronym for Centrum der Büro und Informationstechnik (center for office and information technology).

THORD ANDERSSON/
PATRIK LINDÉN

More new products than ever

At this year's CeBIT, Ericsson has a larger stand and is displaying more products than ever before. Ericsson has a total of 2,500 square meters of display area, divided among two stands with more than 700 people working on-site as product experts, hosts or speakers. Thousands of Ericsson employees bringing customers or just catching up on the latest developments can be added to the roster of Ericsson visitors.

A couple of new developments within telephony have received extra attention. The new SH 888 for GSM is a dual-band telephone that can function on

both 900 and 1800 MHz GSM bands.

It also has a built-in PC card, so that it can be connected to a computer without using a modem.

Ericsson is also displaying its new dual-mode telephone, the TH 688. It can support both the GSM and DECT systems. This new product is much-awaited by those who have to carry two telephones. Now, when the user leaves the office DECT network, the phone automatically switches to the GSM network.

Ericsson is also presenting an improved cordless DECT telephone for home use with the model number 140. It is now also available with a built-in digital answering machine.

Another attraction at the Ericsson stand is the new AXD 301 ATM switch, which you

can read more about in the previous issue of Contact.

The main highlight from Mobile Systems is a new, compact micro base station, RBS 2302, which is designed for critical locations with heavy mobile telephone traffic, such as airports. The compact system is easy to install and less expensive for operators to expand if better coverage is needed.

A couple of futuristic solutions still in the prototype stage were also on display, such as an e-mail reader for mobile phones.

It downloads e-mail messages using a mobile phone and displays them on an accessory device the size of a matchbox. Perhaps a product to watch for?

PATRIK LINDÉN



RBS 2302 is featured on the front of the building in the top right-hand corner. It's suitable for areas with heavy mobile traffic.

More about CeBIT on the Net

■ Contact journalists have been reporting daily from CeBIT. Check out Contact's Web site at: <http://inside.ericsson.se>

■ Ericsson also has its own CeBIT Web site: <http://www.ericsson.se/cebit/>

■ Visit the official Web site for more information: <http://www.cebit.se>

Competitors present products

■ Many manufacturers launch new products at CeBIT. Nokia was one of the companies with a range of exciting new products. Nokia's infamous Communicator, which was released more than a year ago (referred to by critics and envious competitors as the gizmo everyone talked about but nobody bought), has now been released in a new version.

The new and improved Communicator has more features and is lighter, weighing only 249 grams. In addition to sending and receiving e-mail and faxes, and functioning as an electronic personal agenda, it will soon be able to handle pictures with a special digital camera soon to be released.

Nortel's data services on display

■ Nortel (Northern Telecom) presented a new advanced technology that sends data and provides Internet access over ordinary power lines.

According to Nortel, data at speeds of at least one megabit per second are possible, which is about ten times faster than ISDN. The technology provides the possibility of remotely controlling electric home appliances, such as a stove or VCR.

PATRIK LINDÉN

Israel buys Ericsson GSM network

Ericsson recently signed a letter of intent to deliver a GSM system to Israel, the country's first GSM network and the first time the operator Hutchison has purchased a complete GSM system from Ericsson.

The Israeli government decided last autumn to issue a license for a GSM 900 system, for which three companies competed. The license was awarded to Partner Commu-

nications Co. (PCC), a joint-venture company with Hutchison Hong Kong as the majority owner.

Large operator

Hutchison is a large mobile operator with international operations. Ericsson has tried to sell the company an entire GSM system for many years. Until now, Hutchison had only purchased parts of systems, such as switching equipment for its system in Bombay.

"Hutchison's purchase of an entire system is an important milestone and positive for the future. The customer now has the possibility of evaluating a complete system, with all components from Ericsson," says Bo Andersson, president of LM Ericsson Israel Ltd.

Mature market

This is a so-called turnkey solution, which means that Ericsson in this case provides everything

except sites for placement of the base stations.

Israel is a mature mobile telephony market, where 30 percent of the population has a mobile phone. Today there are two mobile systems, both based on American standards and with a large number of new subscribers.

Israeli subscribers speak twice as long on their mobile phones as their European counterparts.

"Our customer naturally wants to begin operating its GSM sys-

tem as soon as possible in order to take advantage of the current rush of new subscribers. This creates pressure for us to install and launch operations of several hundred base stations as soon as possible," Bo Andersson explains. "An important task at hand is to find personnel for the necessary installation work. When the system is completed, it will have nationwide coverage."

GUNILLA TAMM

Trim program yields results

Business travel has decreased within some areas of Infocom Systems. The number of business trips within Ericsson Telecom decreased by 25 percent in January this year compared with the same month last year, while more people are choosing less expensive travel alternatives.

"1998 looks as if it may bring about a break in the trend for the operation's travel habits," says Rolf Nilsson, the business area's travel manager.

Detailed survey

Travel is one of the largest items the business area is looking into within the Trim-98 savings program. Rolf Nilsson is compiling statistics concerning business travel within Infocom Systems in Sweden. The basis for a detailed survey is being created through continuous reports from travel agencies that cooperate with Ericsson.

Increased travel

Since the early 1990s, travel has increased annually within all companies. In January of this year, that trend was broken for the first time. Ericsson Telecom AB in particular has affected the statistics. They also represent the largest volume of travel. The Stockholm area is especially travel-intensive.

In January of this year, 1,500 trips were taken within Ericsson Telecom in Stockholm, compared with 2,000 trips in January last year. Up to the present time, that level has been maintained throughout the entire first quarter.

Rolf Nilsson also states that people within the company are choosing less expensive tickets; currently an average of 43 percent cheaper than full price (business class). This can be compared to 39 percent for last year. However, in the last two years, the trend has been that travelers are buying less expensive tickets. One explanation is that people have become more cost conscious and think twice about whether a trip is really necessary. Another is that competition in the travel business has increased.

Book trips early

Good, long-term planning is essential for getting a reasonable fare.

"The earlier the agency is asked to book a trip, the greater their possibility of finding a good deal. By booking at least seven days in advance, the price can be substantially lower. I think that many people forget that a trip can be canceled as long as the tickets have not been printed," says Rolf Nilsson.

Greater cost awareness among those who travel frequently will contribute to helping reach the Trim-98's goal, which is to reduce costs equivalent to SEK 500 million in 1998.

LENA WIDEGREN

■ Infocom Systems is implementing new methods for the use of external consultants. The purpose of this is to gain more control over costs. The changes will affect Ericsson Telecom AB and Ericsson Business Networks AB, and is a part of the business area's savings program, Trim-98.

Today, a large number of different consulting firms are used within both companies. This is necessary in order to ensure specific demands for skills that are occasionally needed within operations. But since guidelines are becoming stricter, more beneficial contracts can be obtained and the consultants who are brought in can be utilized more efficiently. The new directive means, among other things, that all negotiations concerning consultant services will be made via a purchasing function within Infocom Systems called BN Sourcing. A Web-based ordering tool, Consultant Central, has been developed in order to facilitate the purchasing process. As of March 23, it will only be possible to purchase consulting services through Consultant Central. More frequent balancing of invoices as well as more thorough checks of the purchaser's authorization are other aspects of the new policy.

For more information call: +46 8 719 1080 or visit the Web address: <http://bn.ericsson.se/bnchange/>

LW

hello there



Pia, how do you like your new job?

Pia Gideon is the newly appointed communications manager in charge of external corporate relations.

When Contact met her, she had rolled in a cart filled with large piles of notebooks and binders to her new office, where a new phone and computer had just been delivered.

• What does your new job involve?

I will be taking care of press contacts and developing guidelines for Ericsson's external relations.

I am also responsible for PR, a job which has previously not received much emphasis at the corporate level.

• What is the first thing you'll do?

I've only been here for a few weeks, but what strikes me as I go through all the piles of paperwork is that Ericsson has a very high tolerance for long sentences.

I would appreciate somewhat shorter sentences in the future.

There is also a lot to do concerning Ericsson's press releases. The layout has a 1950's look.

• What is your working history?

Most recently I worked as a consultant within financial communications. Before that I worked for ten years as a financial journalist for Dagens Industri and Veckans Affärer (Swedish business publications).

• Why did you choose Ericsson?

As a financial journalist, you're constantly curious about large corporations, and for a long period of time, I have wanted to work for a company.

I actually can't think of a more exciting company than Ericsson.

There is a high rate of change, and the operation affects so many different areas of society.

• Who is Pia, the private person?

I was born in Lund, Sweden, but have lived in Stockholm for almost 20 years.

I have two children aged eight and eleven. Thanks to them, I don't have to worry about how to fill my free time. It is really a lot of fun to spend time with them.

I spend my spare time watching the children play soccer, and I enjoy reading and traveling to Skåne in southern Sweden.

MIA WIDELL ÖRNUNG

Swindon expands its design team

Ericsson Components' design center in Swindon, southwest of London, is taking a giant step by substantially expanding personnel strength and simultaneously doubling its office space. The increasingly strong demand for integrated circuits for telecommunications, especially for mobile telephony, has created a need for skilled designers.

"This investment is the key to continued expansion in Europe, and will give us the capacity to assist our internal and external customers", says Sigrun Hjelmquist, newly appointed presi-

dent of Ericsson Components.

The design center was started seven years ago with focus on the design of integrated circuits and design support, and today, has a team of 35 development engineers, each with an average of 15 years' experience in circuit design. They carry out design work for Ericsson Components' entire product line: customer specific circuits and standard circuits, with special focus on applications within mobile telephony.

Jerry Soper, the Swindon office's marketing manager for Europe, says that "the rapid development within telecommunications has meant that many more producers are entering a market in which specialists who are able to shorten lead times within technological deve-

lopments are in demand. Expansion is enabling us to become stronger and therefore, ensure that we are the supplier to more customers."

The design center in Swindon assists with a broad skills base for circuit design within Bipolar, BiCMOS and CMOS technology. This applies to design and layout both for highly advanced designs, analog/RF, digital, and mixed mode, in other words, a mix of analog and digital functions on the same silicon.

"The combination of a cutting-edge project and a positive working environment here in Swindon has made it possible for us to attract top caliber engineers to this competitive industry. In Great Britain there is a good supply of skilled design-



Access to skilled designers in Great Britain makes the Swindon Design Center a hotbed for Ericsson Component's design operations.

ers; this has supported the decision to expand our Swindon operations," explains Swindon manager, Stan Anderson.

INGER BJÖRKLIND
BENGSSON

Burmese opposition criticizes Ericsson

The Burmese government in exile and action groups for human rights are criticizing Ericsson for continuing to do business with Burma. They are demanding that Ericsson boycott Burma as long as the military regime is in power and crimes against human rights continue.

"With all due respect for people's opinions and commitment to human rights, Ericsson cannot dictate its own foreign policy. The UN, Amnesty

International and the Catholic Church have not ordered a boycott and we follow the guidelines set forth by international organizations", says Per Olof Åkerberg, who is responsible for Ericsson's government contacts.

"The company's policy is to try and stay out of political issues," he explains.

"Quite simply, we don't have the resources that politicians have in order to make foreign policy assessments. A boycott seldom contributes to democratic development within a country."

The rest of the world is divided concerning the problem in Burma. Southeast Asian countries are encouraging business contacts with the hope that this will lead to a democratization process. Last year Burma was admitted to ASEAN (Association of Southeast Asian Nations).

However, the Western world is criticizing the military regime. But the only countries that have initiated a total trade boycott are Canada, New Zealand and Australia. During 1996, the EU discontinued long-term assistance invest-

ment and all political cooperation, but has not initiated a trade boycott. The U.S. introduced a ban against new investment in Burma last year.

Ericsson's operations in Burma are relatively small. Sales have totaled SEK 10-20 million in the last two years. There is no registered office in the country, and Ericsson has no investments, nor is making any investments there. The majority of Ericsson's competitors have similar or larger operations in Burma.

MIA WIDELL ÖRNUNG

**We have won the '97 European Quality Award :
another step towards excellence...**



Participation is important

The semi-conductor industry requires tremendous efforts in terms of investments, innovative capacity, research, development and marketing (pricing, delivery deadlines, service). Right from the outset, the undeniable quality of our company's production facilities and sales teams has been the driving force behind our activities. A determination to achieve perfection now entirely pervades our structure and our workforce. It represents the cornerstone of our corporate philosophy and enables us to adapt successfully to the accelerated development of our sector.

Winning is rewarding

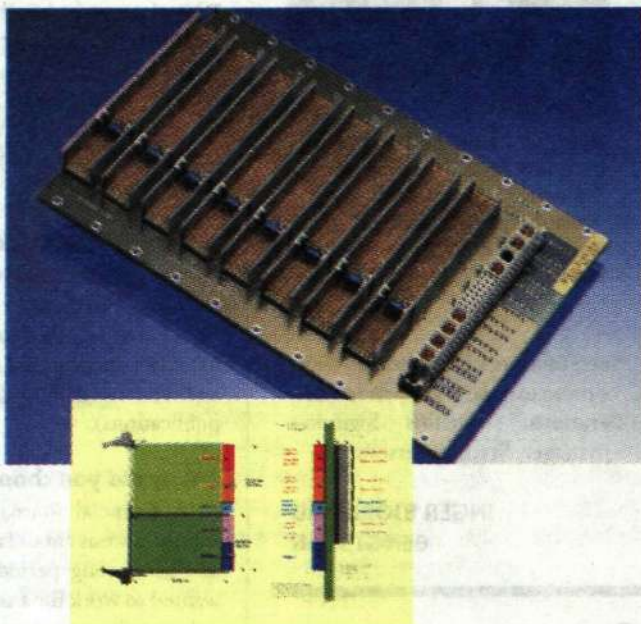
This year, we have earned the European Quality Award, the most prestigious European recognition of global corporate quality. It honours the pursuit of an ideal relationship between a company, its employees, its shareholders, and its social and natural environment. The award is bestowed on the basis of an extremely severe set of terms of reference and an audit, which required the wholehearted implication of all within the company. The motivation and remarkable enthusiasm of our personnel have enabled us to achieve this goal of worldwide significance.

Perseverance is crucial

Nonetheless, we do not see this award as an arrival point, the final stage of a complex process. It is simply another brick laid upon the harmonious structure – encompassing nature, people and industry – which we consistently strive to build. Admittedly, perfection is not of this world. However, the quest for the absolute, so characteristic of humankind, impels us to make persistent endeavours which guide us towards excellence.



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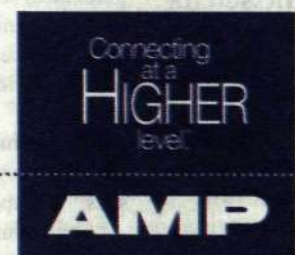
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portrait

Lisbeth Tylén has combined a top-level job and a typical woman's job in a male-dominated world. As a secretary and president's assistant, she is now working with her fourth president, Ericsson's new CEO, Sven-Christer Nilsson.

Executive secretary with determination

The management guru Barbro Dahlbom-Hall has written a great deal about the roll of women in business, and the fact that not so many have risen above the categories of "Mom" or "Gal Friday".

"Of course some motherly qualities are required, if by that you mean being able to juggle several things at once, but I am not very happy with any of those terms," says Lisbeth Tylén.

No, Lisbeth Tylén does not fit into those traditional rolls. Very Competant Woman is her title. Like many at Ericsson Microwave in Mölndal, she has been with the company for a long time. She started 15 years ago in purchasing, but it almost lasted only a year and a half. She had given notice in order to start working at a law firm, but her exit interview turned into an employment interview instead, and Lisbeth Tylén was offered a job as a secretary to Ulf H. Johansson who was the business area manager at the time.

"I am a good administrator", she says in explanation of her stellar career.

Very determined

Lisbeth Tylén is well respected. "Queen-like but with warmth. She's a tough cookie," say her colleagues as we eavesdrop in the corridors in Mölndal.

A tough cookie is an expression used almost exclusively to describe women. Men have "stature." What does Lisbeth Tylén think herself?

"Yes, I think I am very determined and I am not embarrassed about that. We mature and become wiser as time passes. For my part, this means that I have learned to be assertive, but at the same time, some of my rough edges have been smoothed over. I am skilled at communicating and am a good contact person."

She was born in Gothenburg and grew up in different parts of the city: Högsbo, Kungsladugård and Majorna. Contact with many different languages and her years abroad have taken the edge off of her dialect.

As a teenager, she worked both as an au pair and as a cleaning person in Switzerland, but her mother thought that she needed an education. Her three years of secretarial training were followed by her first marriage and another nine years in Lausanne. Back in Sweden, she worked for just a couple of years at a transport company before coming to Ericsson.

Fourth president in a row

"Now I have one of Sweden's funnest jobs, with many outside contacts. A large amount of freedom is combined with great demands." Boring? "Never. I can actually say that I have changed jobs every time we have changed presidents," says Lisbeth Tylén.

Ulf H. Johansson was the first in the chronology of presidents, from 1985 to 1989; then came Bengt Halse who was the division president from 1990 to 1995 and now Lisbeth Tylén is leaving Jan-Åke Kark to work with Sven-Christer Nilsson.

"Ulf H. was an old-fashioned, patriarchal kind of president, Jan-Åke Kark is on the opposite end of the spectrum. He does not view himself as a president, but rather as an employee leader and a co-worker. In terms of management style, Bengt Halse was just about in between. Ulf H. did not understand computers, Bengt learned to use memo before he left, and Jan-Åke is competent in IT technology. As people, I liked all three," says Lisbeth Tylén.

And the new president?

"We have met a couple of times, but of course we do not know each other yet. He seems to be open, sympathetic and laughs easily."

"I am looking forward to my new job, but I will miss my colleagues in Mölndal, not to mention anyone in particular. Some of us



"I have determination and I am not embarrassed by that," says Lisbeth Tylén who will soon assume the job of secretary for Ericsson's new CEO, Sven-Christer Nilsson.

Photo: ANNA REHNBERG/
KAMERAREPORTAGE

have struggled together for many years, and we share many positive memories and common experiences."

On the other hand, Lisbeth Tylén will not miss Gothenburg or her family, since she will commute weekly.

"When I received the offer, we did not decide right away. We took a weekend at the cottage to think about it."

Enjoys working

Her family includes her mother, a sister in Switzerland, her husband Ulf and his three grown sons. Her husband, Ulf Tylén, is a doctor and professor of diagnostic radiology.

Was the job of secretary to the president what Lisbeth thought of becoming when she was a teenager in Gothenburg, envisioning her future?

"No, at that time I had no idea what I wanted to do. If I had to do something else today, I would be a furniture upholsterer."

She enjoys working with her hands and is very practical. She sews her own curtains, reupholsters sofas and chairs and maintains order in her flower beds at the cottage.

Even though secretarial work at Lisbeth Tylén's level is often "more than a 40-hour-a-week job", Ericsson is not her entire life.

"I don't have any special hobbies, but I am interested in a lot of things." Currently

the most profound reading material on her nightstand is the latest issue of a culinary magazine. "Ulf and I cook together and we like to experiment. Right now we are into an Indian phase. And we also have a subscription series at the concert hall and the Gothenburg opera," says Lisbeth Tylén.

She almost looks a little embarrassed when she says that her favorite is Madame Butterfly, but who doesn't get a thrill from hearing Puccini with all the romance, tragedy and feeling in Butterfly, Tosca and La Bohème?

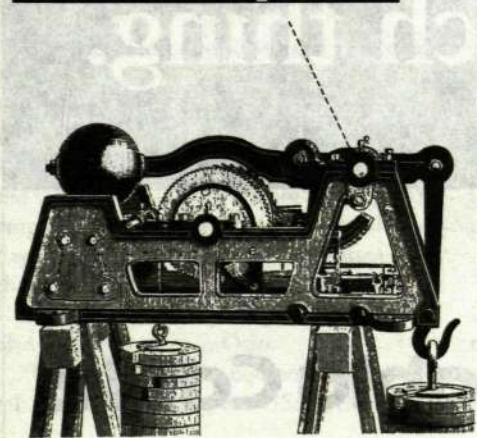
Likes to sing the blues

In addition to all of her other qualifications, Lisbeth Tylén has a nice singing voice. We know, since we heard her spontaneously break out into the blues when the fish in the new aquarium in the management offices moved on to that great fish paradise.

"We're gonna buy new fish, 'cause the old ones have gone..."

AGNETA LINDBLOM HULTHÉN

from the past



Popular fire alarm won prize in Paris

At the World Exhibition in Paris in 1889, this machine was awarded a gold medal. It is a so-called tolling machine manufactured at LM Ericsson & Co.'s Mechanical Workshop in Stockholm. It was for this same exhibition, incidentally, that the Eiffel Tower was built.

Fire alarm equipment was an important part of LM Ericsson's operations at that

time. Fire alarm telegraphs had already been delivered to several countries around the world.

This tolling machine was listed in LM Ericsson's 1889 catalogue and sold for a price of SEK 500. This is how the machine was described in the catalog:

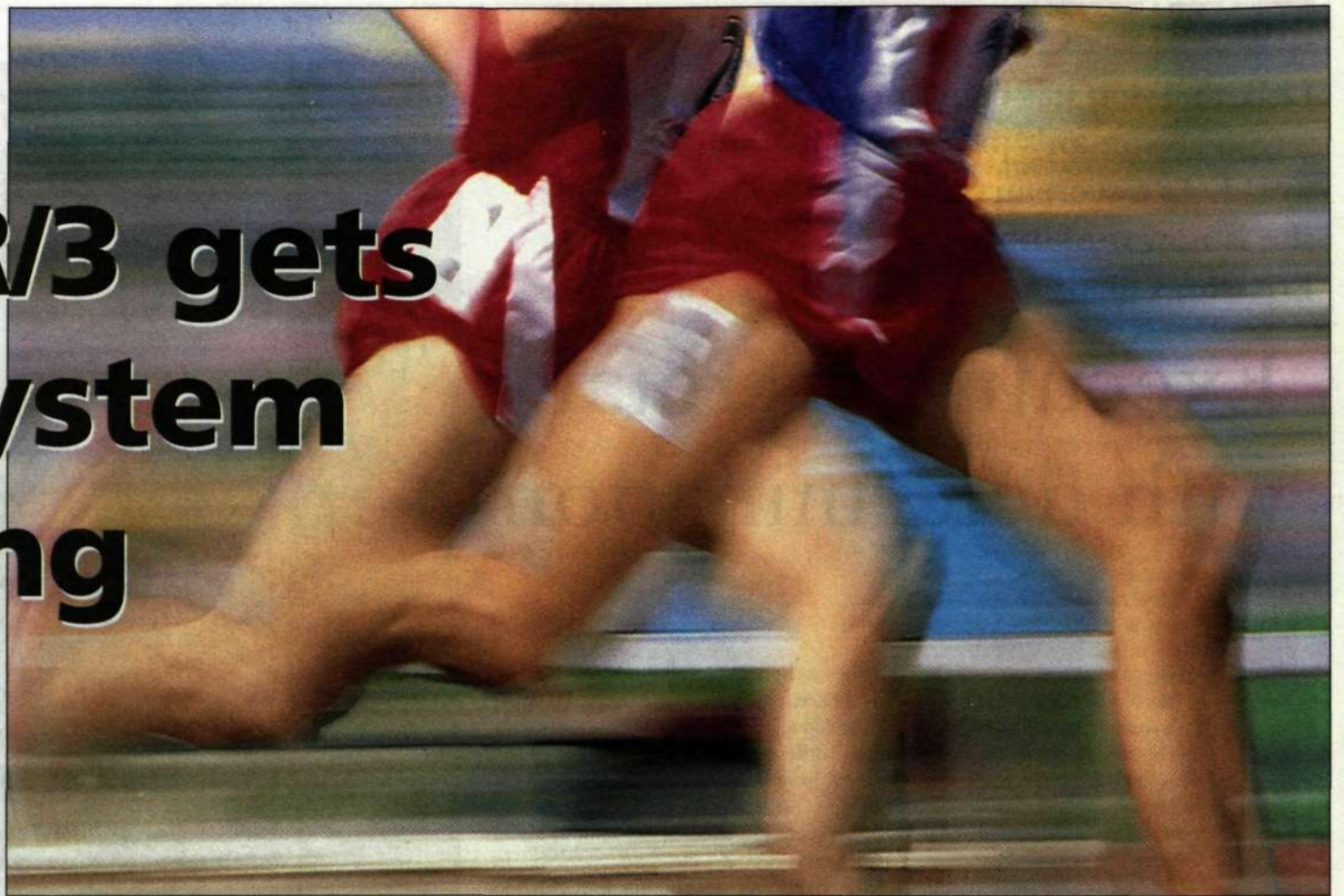
"The machine pictured above has been developed in order to allow tolling to commence immediately upon the arrival of the fire signal to the station. The machine is ac-

tivated by depressing a push-button at the fire station and, after winding, it can toll approximately 80 times, after which tolling continues in the usual manner. It is possible to arrange it so that the doors open automatically upon the first ring."

One of these unique tolling machines has survived until this day and is now on display at the Telemuseum in Stockholm.

THORD ANDERSSON

SAP R/3 gets the system moving



Time and speed are the focus. Players in the stock market demand faster financial reporting. With the SAP R/3 business application system, matters regarding finance and personnel, for example, will be handled faster.

Photo: MIKE POWELL/ALLSPORT

The SAP R/3 business application system is making broad inroads at Ericsson and will eventually replace hundreds of other systems. This is not just another new IT or computer system, it has also had the effect of speeding up the efficiency-enhancement and coordination processes that are currently under way within Ericsson.

SAP R/3 will eventually replace hundreds of different local systems that handle finance, sales support, orders, distribution, projects and personnel at Ericsson's 200 companies. It will also replace the company's routines for accounting and financial monitoring.

Coordination along with faster, more efficient routines and processes bring obvious advantages to the company. Time is money. Players in the stock market are continually demanding faster financial reporting. This also has the effect of focusing attention on the processes and speed.

Globalization, increased competition, and a market in which changes are faster than lightning and products increasingly short-lived, all require continuously improving efficiency. Those companies that want to be competitive must continually strive to become more efficient in their business and operational processes.

This has been taking place at Ericsson since the beginning of the year in a company-wide project known as EGBM (Ericsson Global Business Model).

The decision to make SAP R/3 a part of that model was taken by company management at the end of December 1997, when it became clear that a decision had to be made regarding which processes to use, in order to be able to choose the proper support for them.

Work is underway

Parallel with efficiency enhancement and process development, work is underway to select from SAP R/3's smorgasbord of options, those which will best serve Ericsson's needs in the areas of operational processes, business support and financial structures.

"Process coordination is accelerating the need to implement SAP R/3. Deciding which aspects of R/3 fit Ericsson's needs, accelerates, in turn, the need to enhance operational efficiency. It is a chain reaction," says Göran Haner, responsible for SAP R/3 at Ericsson Data.

"Unified processes make it easier for Ericsson's more than 100,000 employees to cooperate on a global level, to switch workplaces within the company, to form global teams and to quickly develop businesses in new fields and new parts of the world. Workplaces will operate the same way in

Stockholm as in Kuala Lumpur using R/3 as a support system," Göran Haner explains.

This enables Ericsson to focus more on business operations than designing and overseeing local systems.

Everyone working at Ericsson will be affected by R/3 in some way, although it may not necessarily be noticeable.

"We are gathering increasing amounts of information and data with the help of Web interfaces, but even here, SAP R/3 will be just beneath the surface keeping track of our data."

New centers of knowledge

Ericsson Data is currently constructing an Ericsson-wide competency center for SAP R/3 with responsibility for development and operation of all SAP systems. About 150 people from Ericsson Data are currently working on this.

Three operational centers with responsibility for implementation support and operation of SAP applications will be built in Dallas, Texas; Stockholm and Kuala Lumpur.

A pilot project for SAP R/3 within Ericsson will be implemented this year, and by the spring of 1999, implementation on a broad front is expected to begin.

EVA ANDERSSON

What is SAP?

■ SAP, a German company, is the largest provider of business application systems in the world and the fourth largest supplier of software. SAP stands for Systems, Applications and Products for information management (in German: Systemen, Anwendungen und Produkten in der data verarbeiten).

Why SAP?

■ SAP is a large supplier with extensive resources for further development and the capacity to be on the front lines of development. SAP-competency exists worldwide, an advantage for a global company like Ericsson.

What is R/3?

■ A business system that supports the whole business process including logistics, finance, production, inventory, sales, invoicing and personnel.

If you want to find out more about Ericsson's implementation of SAP R/3, contact: Göran Haner, Ericsson Data, e-mail: goran.haner@edt.ericsson.se

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TEMS makes it easier to plan indoor coverage

Small testing tools for mobile telephone networks have become a big success for Ericsson's Erisoft software company. Its new products make it both easier and cheaper for operators to plan indoor coverage, even before a building is constructed.

The popularity of mobile telephones has created customer demand for good indoor coverage, especially in office buildings and shopping centers. Up until now, indoor planning has been conducted by qualified engineers who, based on practical experience, know where to position base stations and antennas and know which frequencies can be used.

Fast cell planning

"Since the demand for coverage, capacity and quality will increase dramatically, engineers experienced in this area are going to be in short supply for operators. Now we are unveiling a series of new products that can easily be used by even relatively inexperienced personnel," explains Kari Korkala, product developer for testing and surveillance systems within Ericsson Erisoft.

The calculation tool TEMS Prediction allows for fast preliminary cell planning, taking into consideration the design of the building, the materials in the walls and the type of antenna. If the building has already been constructed and stands ready, coverage of this theoretical network can be quickly tested on the spot using additional tools.

"Using the TEMS Transmitter and TEMS Light products, actual coverage can be registered. Data is then fed into the calculation tool again, providing improved accuracy with regards to indoor planning," says Kari Korkala.

Together, the products make an operator's work both simpler and more cost-effective. The equipment is also compact in size.

Small transmitter

A TEMS Transmitter simulates a transmitting base station/antenna, but is so small that it can fit in a pocket, since the product is actually a modified mobile telephone.



New products from Ericsson Erisoft simplify the planning of indoor mobile telephone networks. Niclas Ögren and Annacarin Falkman from Erisoft are testing indoor coverage here at the Scandic Hotel in Skellefteå with the help of a TEMS Transmitter on the wall and a handheld TEMS Light.

Photo: ELIN ROSENBERG/NORRLANDSFOTO

The transmitter does not require any external power – a fully charged battery is sufficient for one hour – and it can be easily switched.

TEMS Light, in turn, consists of a mobile telephone connected to a laptop computer with special software. By replacing the computer's mouse with a pen, the user can point to exactly where in the building they are by pointing to the blueprints that have been scanned in. The mobile telephone shows the coverage and all of the parameters are stored in the computer.

"Even experienced personnel who work with indoor planning can, with the help of these tools, easily verify which locations are optimal for base stations and antennas. It facilitates cable installation and reduces the risk of needing future adjustments," says Kari Korkala.

The TEMS equipment for indoor coverage was launched at the GSM World Congress in February and is also available for the D-AMPS and PDC mobile telephone systems.

NILS SUNDSTRÖM



What seems to be a mobile telephone is actually something else. The TEMS Transmitter simulates a transmitting base station and is an important part of the system for simplified indoor planning of mobile networks, explains product developer Kari Korkala.

Photo: NILS SUNDSTRÖM

New products simplifies testing of mobile networks

Ericsson's products to monitor and test mobile networks have now been gathered under the name of TEMS Total. The equipment can be used for the training, construction and maintenance of mobile networks.

The products are developed and marketed by the company's Radio Quality Information Systems (RQIS) unit at Ericsson Erisoft. The first TEMS product was introduced back in 1992. Since then, the operation has grown from a handful of employees to around a hundred people today. Most of them are in Skellefteå but there are also regional offices in Dallas, Kuala Lumpur and Basingstoke. There is also a design center in Oslo.

"We develop testing equipment for digital mobile networks, for GSM, D-AMPS

and PDC," explains Christer Edmark, manager for the business unit.

Profitable business

The customer base is large – 130 operators in 57 countries. Equipment for GSM operators represents the largest portion of sales, but even Nokia, Motorola and Nortel are customers.

"They are just small contracts with each operator, but it is a profitable business for us. We had sales of SEK 200 million in 1997, which corresponds to roughly one-fifth of the world market for these products," says Christer Edmark.

Open interfaces

In the past, testing equipment for mobile networks was developed by different companies within Ericsson. The new, comprehensive TEMS Total product portfolio now

covers nine application areas, including installation, optimization, training, surveillance etc.

"The equipment is also perfect for training in mobile telephony. Some of the tools, make it very clear what the messages over the network look like," says design and product manager Arne Viktorsson.

Open interfaces and modular construction make it possible for customers to choose parts themselves and integrate them together with other test systems. TEMS Transmitter, one of the products for indoor planning of mobile networks, can also be used to localize high-volume areas of existing mobile telephone networks. These locations can then be relieved with the installation of new micro base stations, for example.

"The core of our operation is our mobile testers, based on commercial mobile tele-

phones from Ericsson. This means that we can test the mobile telephone network just as any ordinary user would experience signal strength and speech quality," says Arne Viktorsson.

Automation

Development continues in the field of automated testing equipment. Ericsson's calculations show that automatic systems will represent half of the market by 1999. This will mean several advantages for operators.

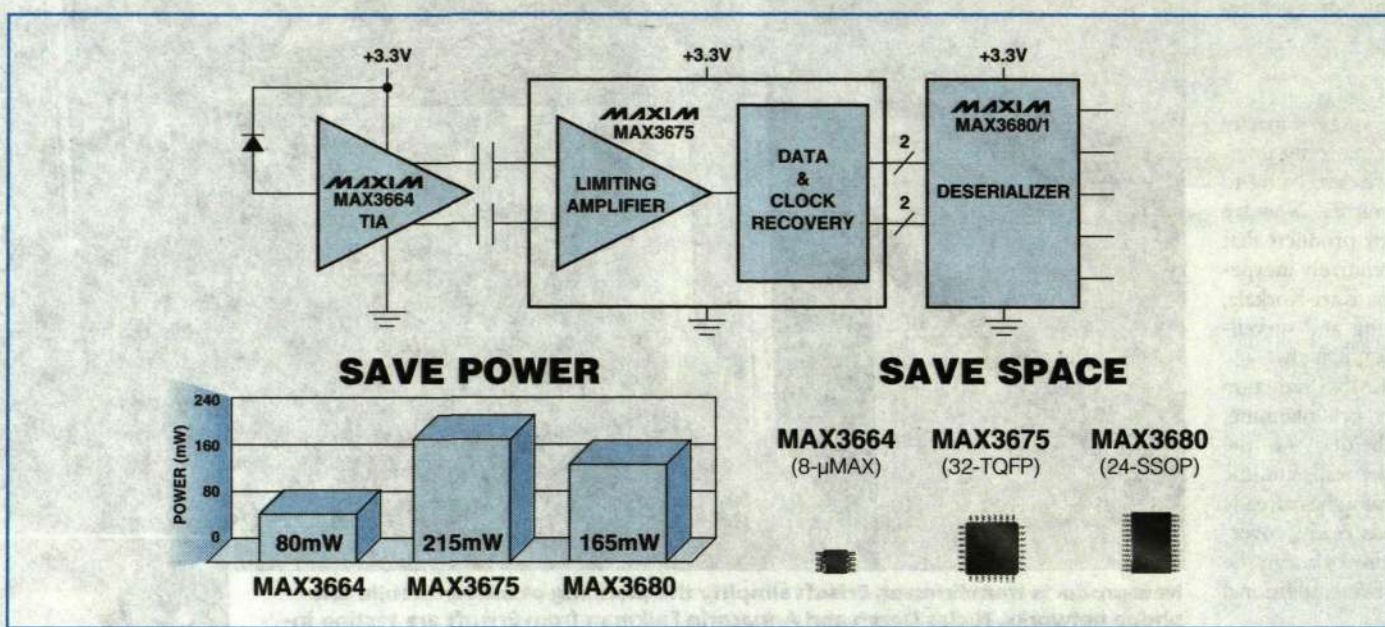
"Perhaps, in a few years, there will be a complete network reporting system built into mobile telephones," says Arne Viktorsson. "Even then, it will be important for us to offer solutions for how to send information and to be able to present in how networks can be optimized in a good way."

NILS SUNDSTRÖM

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Resellers receive computer training

Ericsson's mobile telephone resellers will receive training in computer technology and how to combine computers and mobile communication. The Mobile Telephones and Terminals business area along with computer consulting company WM-data have developed a new certification program for resellers.

"Most of our resellers are experts on mobile telephones and can easily demonstrate all of the telephone functions. But that knowledge tends to run out when it comes to the small MC12 computer, PC-cards for computer connections or other functions," says Monika Rubensson at Ericsson Mobile, who is one of the forces behind the project.

This problem was discovered in a survey of Ericsson's traditional mobile telephone resellers. Terms like PC-card, file transfer, modem and Internet connection were often vague or unfamiliar, despite the fact that they play an increasingly important roll in the world of mobile computing.

"The difference between Ericsson's new certification program compared with earlier methods and competitors, is that we now have a somewhat different perspective on the training needs. We

have realized that it is not profitable to train different employees on different products. What is most needed, is a basic education in mobile computing products," says Monika Rubensson.

The theory is that a person who understands the basics will have an easier time mastering specific products on their own. This also means that the training can be easily modified to fit the needs of other mobile computing suppliers.

"The skills that we will be teaching are transferable, regardless of whether the product comes from Ericsson, Nokia, Motorola or some other maker. We also see opportunities in combining our certification program with those that Teli and Europolitan offer, for example. But so far, there are no such plans."

Certification is just a part of a larger package that will help retailers with their mobile products. There are three requirements, in addition to certification, that a retailer must meet in order to be able to market these products:

- The retailer must provide an Internet connection from the store.
- Employees must have their own e-mail addresses.
- A computer must be available to demonstrate how products work.

ROBERT ALMQVIST

Totally operational before installation

An entirely new working method is now being introduced for deliveries of AXE-switches. Complete AXE-stations will be constructed and loaded with customer data in the factory. There, the whole system will undergo quality control before it is assembled and shipped as a kit to the customer.

Before, switch components (hardware, software, documentation, etc.) were shipped directly from the suppliers to the installation site. The components were tested individually, but not as a complete unit.

The integration of AXE-stations took place at the installation site. It was only at that time that it was possible to discover if something was wrong or missing. Installers developed into fantastic "fixers", and were often forced to find and solve problems on their own. They built up their own inventory that they knew might be missing when deliveries arrived.

Now, problems like that will be addressed at an earlier stage. Therefore, AXE-stations will be set up and thoroughly tested exactly as they will be when they are installed with the customer. In that way, possible errors can be detected and corrected while still in the factory.

The actual installation work at the customer's site will be much more efficient and professional. All parts will be shipped at the same time and in more complete condition. For example, cables will be delivered bundled, ready for installation.

The new working method is expected to shorten lead time by two weeks. This method will be applied to AXE's standard products, while special orders will continue to be delivered in the traditional way. The method has been developed at Ericsson's assembly shop in Flemingsberg, Sweden. The objective is that all supply centers will work according to the same method.

ANNA NORBERG



Ready to be delivered to Global One. Torbjörn Lundmark, head of Supply Centre Sweden, inaugurated the first AXE-station to be delivered in accordance with the new working method.

diary



Jeremy Bastacky works at Ericsson in Virginia alongside his studies.

Production problems no big deal for Jeremy

Jeremy Bastacky is a 20 year-old process and development engineering co-op from Virginia Tech, where he is working towards a degree in Mechanical Engineering. Jeremy works in the Surface Mount Assembly (SMA) group for Mobile Telephones and Terminals at Ericsson in Lynchburg, Virginia.

Monday Because of the shift change from this morning, work was supposed to start at 7:30 a.m. However, like most Mondays it was a struggle making it in on time. Nonetheless, I walked into the factory hoping to dart into my office, but before I knew it, operators and technicians were hunting me down requesting support for their production line (I wasn't even able to hang my jacket up). In order to fix a particular problem I had to shut down the flow of production until I could come up with a solution. This is when the production managers start looking over my shoulder making their usual statement, "When will it be running? We've got phones to build by Friday!" The next time I had a chance to look at my watch, lunch time had arrived and I still hadn't made it to my office. The rest of the afternoon was just as crazy as the morning and did not calm down until 5:00 p.m. It's time for me to go home, cook dinner, and go to sleep.

Tuesday I crept into my office this morning trying very hard not to be noticed by anyone so that I could finish some projects in the office (of course I had my radio on just incase I needed to be reached). Today was going to be my CAD design day. The machine shop was not to pleased with me because I had forgotten a couple dimensions on my drawings. Unfortunately, only two minutes went by before I heard my name being called over the radio asking for my assistance on the production floor. There goes the rest of my day!!

Wednesday The one thing I take pride

in within our department is the team unity when people are absent or in meetings. Although it could have been a really stressful and nonproductive day, thanks to the technicians and engineers working together to keep the floor running, we were able to make the numbers, not affect yield, and introduce two new products to production.

Thursday It was back to my standard routine of "fire-fighting" or troubleshooting new and existing problems on the SMA machines. Overall, today was not a bad day; I was able to work on the machines and spend time on miscellaneous projects that needed some attention. Of course, since it was Thursday, the night was only beginning when I left work...

Friday TGIF (Thank Goodness It's Friday) It is a beautiful day out, which means I will not be staying late and will be on the golf course by 5:30 p.m. enjoying the calm wind, fresh air and a smooth, refreshing beverage. Oh yeah, work was a standard day except for a few meetings here and there.

Saturday Well, considering the fact that I am turning in my diary on Friday I will just go ahead and exaggerate (lie) about some perfect weekend that I will never have. I think it will go a little something like this: I am enjoying a beautiful afternoon on the Mall at the Cherry Blossom parade in Washington DC, sitting on a blanket having a picnic with a very special young lady. As the day progresses we decide to visit the different museums embracing the cultural experience. Afterwards, we walk to Georgetown for an elegant dinner followed by a blues jazz band for entertainment. Thereafter, we make our way towards M Street and dance the night away in the clubs.

Sunday Recover from Saturday, make the trip back down to Lynchburg, partake in a barbecue, and get ready for the week.

A program that benefits all

The paperless office may not be here yet, but the paperless production system is definitely with us. "ProEngineer" has reduced Computer Aided Design (CAD) time by half and has reduced production time by 30 percent. It represents one of the gains from focusing on implementation of the "right" software.

It all began in 1993 when Anders Zachrisson and Mats Klavmark, designers of Microwaves' products, were searching for a three-dimensional design program. They found ProEngineer to be the best of the solid CAD programs and, following diligent investigation, decided to adopt it.

Today the program is available in 75 work stations, evenly divided between the defense and commercial sectors. It is used for mechanical design operations by all units.

Fewer faults in the prototype

A solid CAD program makes design work much easier, compared with two-dimensional or conventional three-dimensional programs.

The dimensions and other properties of an object are displayed as various parameters. The program recognizes surfaces and boundaries, can add material, calculate stress points and determine whether various components fit together. The different parts of an object can be linked together in so-called "relations," which means that, when one part is changed, other related parts are also modified. If the width of a cover for a box is changed, for example, the box is also changed.

"With solid CAD, we can produce designs twice as fast," Anders Zachrisson says. "For example, an electrical designer and a mechanical designer can work together and test various solutions. This results in far fewer adjustments in the prototype, which saves a great deal of time."

Clearer feedback

A joint venture begun a little less than a year ago with the experimental workshop of the Defense Production Administration clearly shows that additional benefits can be gained from the use of ProEngineer and its related



Lars Emanuelsson and Bo Segertoft say that solid CAD programs can reduce set-up times in the workshop by 30 percent. The program lays out the path for the material that is to be gauged.

Photo: ANNA REHNBERG/KAMERAREPORTAGE

programs. Considerations involving documentation were basic.

"Documentation is time-consuming, but it is, in principle, built into ProEngineer," Mats Klavmark says. "But in order to have the CAD file as an 'original' instead of the blueprint, we first have to ensure a way of obtaining a 'receipt' from production."

In the method that is now being developed in association with the experimental workshop, the operators transfer the file from the program's file function to the ProManufacturing set-up program, which is also a solid CAD program. Modifications from the design are updated directly, and

the designers can obtain direct feedback from the workshop.

Set-up time is reduced

Operator Lars Emanuelsson began to work with ProManufacturing and has assumed much of the responsibility for developing the new system. He has built networks linking various companies in an attempt to find the best way of integrating design and production. Ericsson Microwave is now somewhat of a model.

Based on the design file showing, for example, the dimensions for a radar wave-conductor, the workshop can set measure-

ments for, and program, a milling machine that produces the desired article from a piece of metal. Earlier several rounds of measurement and production were required; now the set-up time has been reduced by 30 percent.

Greater efficiencies related to ProEngineer can be expected. Soon there will be a Web-based function that will benefit the purchasing and production functions since it will contain all the product information. Hopefully, the filing function will also be linked to PRIM in the near future.

BRITT-MARIE WIHDÉN

New production mode yields smaller circuits

Through the use of microvia, a new technology for circuit-board production, printed circuits can be made smaller and less expensive. Technicians at Ericsson Microwave have made substantial progress in the program to adopt this new technology.

In the traditional method of manufacturing circuit boards, holes for the boards' components are drilled completely through the boardsthemselfs. With the new microvia technology, in contrast, laser beams or photo-sensitive paint are used to make smaller holes that penetrate only the outer layers of the boards' plastic and metal surfaces.

The new technology offers a number of advantages. When the holes are smaller, components can be mounted closer on a circuit board. The "packing density" increases by 30 to 40 percent. And with lower inductance and capacitance, the electrical performance of the printed circuit increases. Other advantages of the microvia tech-

nology include the fact that less expensive circuit boards with fewer conducting layers can be used and that the cooling of the cards' components becomes more efficient.

"The development of microvia represents the next major technical step in circuit board production since the breakthrough of the four-layer technology at the end of the 1970s," says Per Ligander at UR, the core unit for Microwave technology and high-speed electronics.

Many different technologies

There are currently more than 20 different technologies for producing printed circuits by means of microvia. Per Ligander and his colleagues at UR are conducting a project that is designed to evaluate three of them. The project positions Ericsson Microwave in the front ranks with respect to implementation of the new technology, and last autumn one of the technologies – in which the holes in the circuit board were drilled by laser beams – was approved. A printed circuit for a base station for the future



Per Ligander has evaluated three different technologies for making printed circuits smaller and less expensive.

Photo: NICLAS HENNINGSSON

WCDMA mobile telephone system has already been produced by means of the new technology, but the true breakthrough still lies ahead, according to Per Ligander.

"Things are still moving a bit slowly, but my guess is that use of microvia will really accelerate by the autumn of this year. We

will then have a so-called 'ketchup effect,' with microvia beginning to be used in an increasing number of applications."

The two other microvia technologies that are being evaluated by Per Ligander and his colleagues are expected to be approved for use in Ericsson's products at the end of 1998 and in the beginning of 1999, respectively.

Recognition essential

Despite the fact that Ericsson Microwave does not manufacture its own printed circuits, Per Ligander emphasizes that it is important for the company to be fully familiar with the opportunities offered by microvia technology. The manner in which printed circuits are produced affects the work of circuit board designers to a high degree. Thus it is essential that they recognize the potential for high packing density and limited electrical problems offered by printed circuits produced by means of microvia technology.

NICLAS HENNINGSSON



"...our marketing people were able to establish valuable personal contacts..."

Tore Bekkevold, in charge of the demonstration at Hjerkin.

The guests who participated in the demonstration at Hjerkin showed great interest in an Arthur that was camouflaged for winter service.

Photo: NICLAS HENNINGSSON

Well-attended demonstration of 'Arthur'

There were more than 120 participants from 14 countries. There was a high degree of interest when Ericsson Radar and the Norwegian Army Supply Administration were hosts to a demonstration of the 'Arthur' radar system on the Hjerkin artillery range in the Norwegian mountain district.

The past year was a successful one for "Arthur," the artillery-tracking radar developed jointly by Ericsson Microwave and its Norwegian subsidiary, Ericsson Radar. The Swedish Defense Materiel Administration (FMV) and the Norwegian Army Supply Administration (HFK) signed contracts covering series deliveries of the system to the Swedish and Norwegian defense authorities and in December the Danish authorities became the first export customer.

120 persons defied the weather

Strengthened by these successes, HFK and Ericsson Radar, which now has product responsibility for Arthur, invited representatives from more than 20 countries to a demonstration of the system in mid-February.

One hundred and twenty persons responded to the invitation and gathered in

dismal gray February weather, with swirling snow and rain showers, on the Hjerkin artillery range, about 400 kilometers north of Oslo in the Norwegian mountain district.

During a full day of lectures and demonstrations, the international guests were able to learn about Arthur's technology and functions, and hear how the Swedish, Norwegian and Danish armies have organized the management of the radar system. The demonstration concluded with a test firing in which Arthur tracked a grenade launcher and mobile artillery with great precision.

A major success

"The test firing exceeded all expectations," reports a highly pleased Tore Bekkevold, a member of the marketing team at Ericsson Radar, who was in charge of the demonstration at Hjerkin. "Arthur found and determined the firing locations with a degree of precision that far exceeded the specifications for the system."

According to Tore Bekkevold, being able to attract participants from so many countries to a marketing activity of this type represents a major success. HFK's involvement in the demonstration was an important reason for this success.

"The fact that HFK was behind the invitation gave the event greater 'dignity' than

if we had arranged a demonstration by ourselves. Moreover, it is in both HFK's and FMV's interest to have a number of countries purchase Arthur. Maintenance and spare parts will then cost less and, with more buyers of the system, there will be increased interest in future upgrades."

Money well invested

The Arthur demonstration was certainly a rather expensive marketing event. All 120 guests had to be transported from Oslo to Hjerkin, housed in a hotel and offered lunch and dinner. But considering the benefits, the money can still be considered to have been notably well invested, Tore Bekkevold believes.

Valuable contacts

"If we include the train trips together, to and from Oslo, we had three days to spend with representatives from countries that are potential customers," he says. "During the dinners and other social activities, our marketing people were able to establish valuable personal contacts and we had plenty of time to discuss the advantages of the system. Compared with a defense trade show, where you can perhaps spend ten minutes with each potential customer, an activity of this type is enormously valuable."

Denmark, which signed a contract to

purchase Arthur at the end of last year, participated in the demonstration. The Danish representatives showed the international guests how the system is expected to be integrated in the Danish defense program.

"We are exceptionally pleased with this addition to Danish defense facilities," Colonel Jörgensen, a representative of the Danish Army Artillery School, declared. "With Arthur, we have acquired a highly modern system whose ability to both locate enemy artillery and service our own fills a great need in our country's defense program."



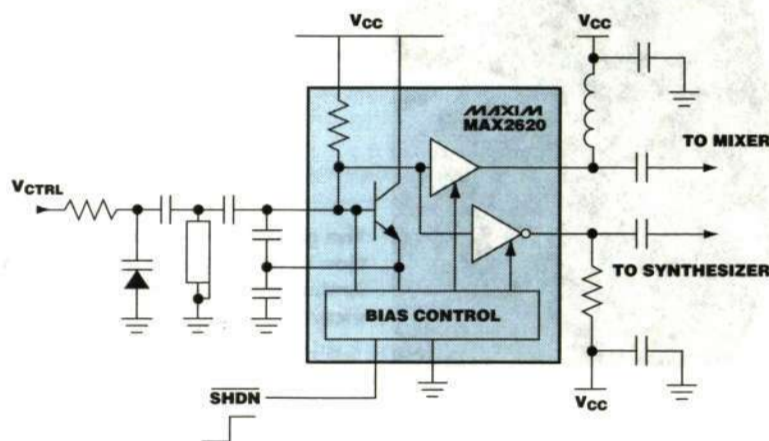
Tore Bekkevold, a member of the marketing team at Ericsson Radar, who was in charge of the demonstration at Hjerkin.

NICLAS HENNINGSSON

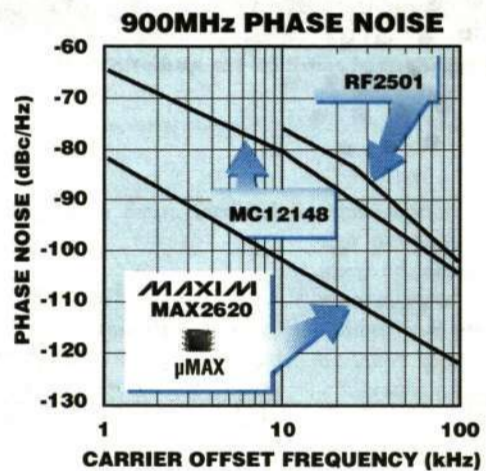
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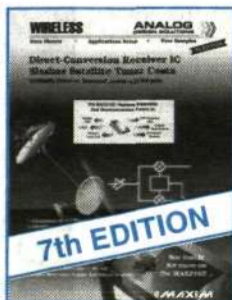


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Joint marketing helps operators

The Rumanian mobile telecom operator, MobiFon, is advertising Ericsson's excellent systems capability and quality. The campaign is part of a new marketing concept in which Ericsson is helping operators to position themselves as market leaders.

Ericsson's strength will become the customer's strength in the marketing concept called "Network Operator Support Package." This means that Ericsson's strong market position within mobile systems is highlighted in a joint marketing campaign with the operator. The concept has helped operators in countries such as India, Lebanon, Lithuania and Russia to get started and obtain new competitive advantages.

A large-scale marketing campaign is now under way in Rumania, where MobiFon is building a nationwide GSM network. Using facts about Ericsson's mobile telephone system, MobiFon is positioning itself against its competitor Mobilrom, which is installing a GSM network with Alcatel.

After the first six months of operation, MobiFon has succeeded in attracting two-thirds of the country's subscribers to its GSM network called CONNEX. The total number of subscribers in 1997 was five times greater than expected, partly thanks to the marketing campaign.

Rumania, with a population of 23 million, now has slightly more than 200,000 GSM subscribers.

New way of thinking

"In order to quickly reinforce our role as a market leader, it's positive for us as a new player to be able to ally ourselves with Ericsson, which is a well-established and leading supplier in the industry," says Kris Crowe, who is responsible for marketing communications at MobiFon.

"We enhance the strengths of the system as a guarantee for our service commitment, while informing that we use the same mobile technology here in Rumania and Bucharest as in most of the other countries



"Ericsson's universe of communication. Welcome to Rumania!" A warm greeting on a billboard in Bucharest. Using a new marketing concept, the operator highlights the advantages of Ericsson's technology. The campaign, which has been successfully used by the Rumanian company MobiFon, was followed up with newspaper ads containing facts.

Photo: NILS BACKMAN

and major cities in the West," Kris Crowe explains.

Marketing efforts in Rumania began with an Ericsson campaign last summer. Ericsson did not become established in the country until 1994 and the advertisement focused on the company's total strength, references and long-term objectives in Rumania. It also gave the Rumanians something to refer to when the MobiFon campaign started the following month.

The idea to implement a marketing concept was formed in 1990, when Ericsson helped Pacific Link establish its TACS network in Hong Kong. The concept was given a fixed format in 1994.

"This represents a new thought process in Ericsson's marketing. It is a unique ser-

vice which none of our mobile telephony competitors offer," says Nils Backman, manager of general advertising projects at the Mobile Systems business area.

The campaigns are customized according to the customer's capabilities and specifications. Ericsson helps to reinforce the message in print media and on television, billboards and other channels.

Quality guaranteed

"We ensure the quality. We can show the operator's customers that we have built systems in 130 countries. We have the know-how and are familiar with the problems that arise and how to solve them," says Nils Backman.

The foundation in the marketing concept



Cristina Nicolescu, head of marketing communications at Ericsson in Rumania (left) and her colleague Kris Crowe from the mobile operator MobiFon, which is now building a nationwide GSM network in Rumania.



Ericsson's brochure on the basics of mobile telephony has been used by operators throughout Europe and Asia. The handbook is an important part of the marketing package designed to help operators.

Photo: BJÖRN SEGER

is a brochure, which serves as a handbook on mobile telephony on a general level. The operator can use the manuscript in a way that is relevant for them and serve as the sender of the message.

Good idea

"This may seem like a simple idea, but this is perhaps why the entire marketing concept has become so appreciated" Nils Backman emphasizes. "Many of our customers have wondered why no one has come up with the idea before. The point is to give the operator an additional competitive advantage, while helping Ericsson become perceived as a better supplier."

NILS SUNDSTRÖM

Partnership promotes sales

Cooperation with megadistributors is a simple and cost-efficient way to increase sales. The Enterprise Networks business unit has thus far experienced steadily increasing market shares, particularly in the Nordic countries, in addition to declining sales costs. This is mainly thanks to cooperation with megadistributors, which include operators and network owners with an in-house sales organization.

For a distributor that is also an operator, there is an immediate business benefit in addition to the sales gains from selling Ericsson equipment. Since products and solutions for business communication – such as Ericsson's MD 110, Business-Phone or Business Cordless – generate traffic in operators' networks, they have an inherent interest in distributing these products in the market.

"We need to make it as beneficial as possible for our partners to sell our particular products," says Jens Gregers Jensen, distribution manager of the business units megadistributor sales channel.

The key word is simplicity – simplicity of pricing, logistics, distribution, product information and so on.

Pricing has changed and refers more to function than to a particular technical content. For example, there should be one price for the cordless telephony function

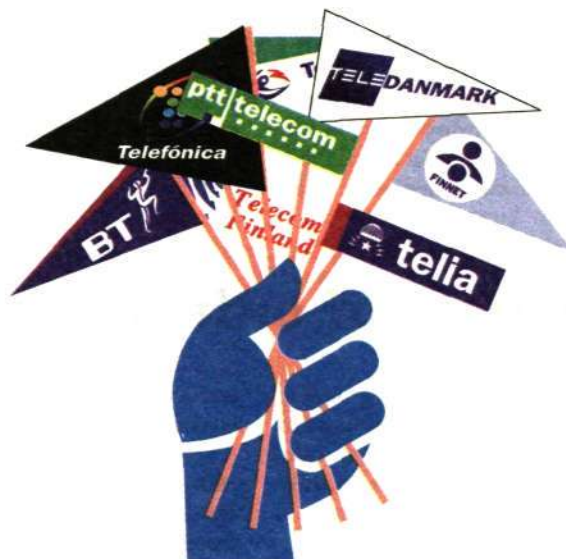
per userperiod. There is also an aim to achieve price harmonization between different countries.

The search for new partners is conducted in parallel with refining cooperation with existing ones. The trend is increasingly shifting from direct sales to joint coopera-

tion, quite simply because it increases efficiency. The launch of a product through a partner's extensive sales organization has a much greater impact than simply focusing on the few sales associates that Ericsson can spare for the project.

"Since we must increase volumes and profitability, cooperation with megadistributors is important for our success. It is a smart way to sell a lot at a low cost," says Jens Gregers Jensen.

KARI MALMSTRÖM



Ericsson will be able to increase sales of their products through a close cooperation with megadistributors, i.e. operators and network owners with an in-house sales organization.

Illustration: ÅSA HARVARD

Several different partners

■ Nordic partners include Telia and Internordia in Sweden, Telenor and Telia in Norway, TeleDanmark and Telia in Denmark, and a number of different partners in Finland.

Efforts are ongoing to promote this way of working vis-à-vis PTT Netherlands and Telefónica of Spain, as well as several other future new partners.

KM

Four years ago, Ericsson established a local company in China. Today, China is Ericsson's second largest market after the U.S. This year, Ericsson's sales in the country are expected to reach about USD 2.5 billion.

Chinese openness benefits telecom

The professor at the podium is discussing a hot potato. His lecture concerns selling Chinese state-owned telephone companies to private interests. The audience consists of China's telecom elite — representatives from government authorities and the national operator China Telecom. They are all smiling. One wonders if it's in agreement or in dismissal, but nevertheless, it is still permitted to discuss privatization of major state-owned companies as a part of an increasingly open economy.

The rapid economic development in China is just as visible as the immense skyscrapers emerging on the Shanghai skyline. At the end of the 1970s, China began to show a slight measure of interest for foreign goods and capital. Ericsson began by mainly selling AXE to China, but it was not until Ericsson established a local company in 1994 that growth really took off. Then, in 1994, barely 29 million Chinese had a telephone. Today, four years later, that figure has increased nearly three-fold to 75 million and additional 14 million people have a mobile phone.

"Last year, China was Ericsson's number-one market in terms of orders booked. It was our best year ever and there are no signs of a weakening trend," says John Gilbertson, manager of Ericsson in China.

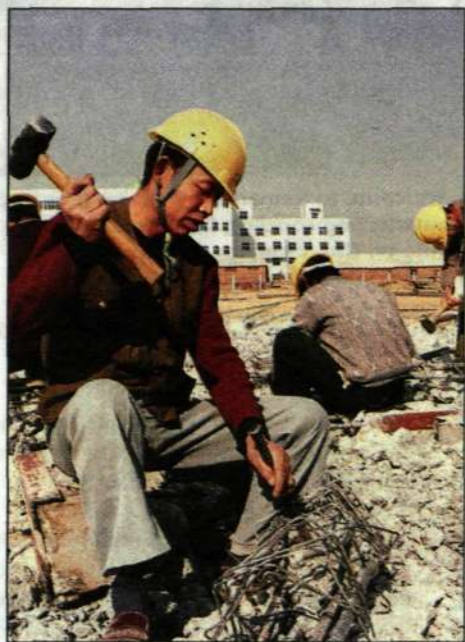
Prioritizing telecom

China is prioritizing investments in telecommunications. Last year, the fifteenth People's



The president of Ericsson in China, John Gilbertson, believes that Ericsson has a bright future ahead.

Congress established that agriculture, energy, infrastructure and telecommunications were to receive the greatest investments. This applies to both advanced telecom and datacom, as well as providing basic telephony to many areas.



Tan Guowen from the less-developed Sichuan province in southwestern China, has come to Beijing to build Ericsson's new plant for mobile phone and base station production. It will be inaugurated at the end of this year with nearly double the number of employees.

Photo: MIA WIDELL ÖRNUNG

Ericsson in China is currently strongest in mobile communications. China Telecom's GSM network with its seven million subscribers is already the largest in the world. Ericsson has supplied approximately half of the mobile networks in China and the demand for mobile telephones is constantly on the rise.

"When I arrived in China in 1993, a mobile telephone was automatically associated with Motorola. Today, Ericsson is at least as well-known," John Gilbertson comments.

Strong position

Ericsson's strong position when it comes to mobile telephony is also apparent at Ericsson's joint-venture company, Beijing Ericsson Mobile Communications (BMC), which produces base stations and mobile telephones. In 1997, the company began operating two new production lines, hired about 200 people and began construction on a new

plant. When the plant is completed at the end of the year, the number of employees will nearly double from today's 560 to 1,000.

In fixed networks, Ericsson faces tough competition, not least from Chinese manufacturers. They have established a good level of expertise and can produce telecom equipment at a low cost.

Internet on the rise

Ericsson's next area of opportunity will be in the multimedia and datacom sector. At the end of last year, Ericsson was the first foreign infocom company to establish a wholly owned research company that will mainly develop Internet access products.

The major changes taking place in the economy also create problems. Economic development is highly concentrated to the cities and provinces on the east coast. Because cities can offer everything from education to cars and mobile phones, only political decisions can suppress the steady flow of people moving from the countryside. Some 40 percent of all villages in China have no telephone connection with the outside world.

This is reflected in Ericsson's operations. In the coastal province of Guangdong, Ericsson is signing major GSM orders and in the megacity of Chongqing, there is a demand for broadband ATM services, while the major portions of the country lack basic telephone services. China is not one market, but many. There are only three state-owned operators in China, China Telecom and the newly established and considerably smaller Unicom and China Great Wall. However, an increasing number of telecom and datacom purchasing decisions are being made regionally.

"We often sell directly to municipalities and counties. They themselves know what they need. We have also regionalized our organization so that we can be closer to the customer," says John Gilbertson.

The ongoing decentralization and the increasingly open economic conditions benefits Ericsson's growth in China. For 1998, Ericsson predicts continued strong sales of nearly USD 2.5 billion.

MIA WIDELL ÖRNUNG



Economic development in China is rapid, but it is also a land of contrasts. While many city-dwellers are obtaining mobile phones and Internet, 40 percent of the villages in the countryside lack a telephone connection with the outside world.

Photo: ULF BERGLUND

Facts about China

Population: China has more than 1.2 billion inhabitants. Telephone penetration is seven percent. 75 million people have a fixed-line telephone and 14 million have a mobile phone.

Growth: Growth is about ten percent of GDP annually.

Average income: The average monthly income in Beijing is 450 yuan. An Ericsson mobile phone with a SIM card costs about 6,000 yuan.

Ericsson in China: Ericsson in China has more than 3,300 employees and is located in 21 sites across China. Ericsson has just under 50 percent of the market for mobile systems, 30 percent of mobile telephone sales and 10 percent of the fixed telecom market.

Ericsson investing in education

For the first time, Ericsson is offering a master's degree in telecommunications in a cooperative venture between the newly formed Ericsson China Academy in Beijing and several universities.

Ericsson China Academy opened its doors at the end of last year. Each year, it will accept more than 30 young leaders in the infocom industry into its master's program. Completion of the part-time, two-year program results in a Master of Management in Infocom degree.

"The program is not just for Ericsson employees, but is open to Ericsson customers and others within the infocom industry. This is the first graduate degree program that any foreign company has organized in China. And it has been extremely well received, not least of all by the Chinese Ministry of Education and the Ministry of Postal and Telecommunications Services," says the director of Ericsson China Academy, Chijin Liu, or C.J. as he is called.

Ericsson is investing millions of dollars in the academy. This is good not only from an

educational perspective, but it also gives Ericsson certain strategic advantages. China is now Ericsson's second largest market after the United States, and the Chinese market is expanding rapidly.

"Ericsson's investment in the Ericsson China Academy shows that it has a long-term commitment to Chinese customers, which translates into a competitive advantage," says C.J.

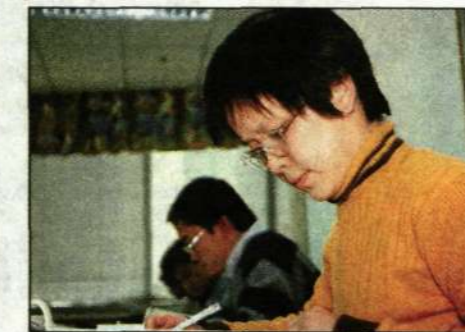
Demand for professionals

There is a tremendous demand for well educated people in China. By the year 2000, the demand for professionals with Master of Business Administration degrees is expected to reach 300,000. In reality, however, there will only be 30,000 people trained if the educational system continues at current levels.

Ericsson China Academy also provides short courses in leadership, arranges conferences and promotes education through programs such as institutional sponsorship and student scholarships.

The Ericsson China Training Center has been in existence for more than three years and will continue to offer courses in technology and administration. These courses, like the new master's program, will be offered both to Ericsson employees and to customers. "There is a valuable exchange of information that takes place. Customers provide good insight and opinions. They are the ones who have experience with how our products actually work," says Deborah Guan, who works for Ericsson's fixed-wire telephony unit in China, but who will soon switch to the mobile telephone division.

For customers, the training gives them a



Customers and employees meet at the Ericsson China Training Center. "Customers provide good insight and opinions. They are the ones who have experience with how our products actually work," says Deborah Guan at the center.

chance to learn more about Ericsson and Ericsson's products.

"Ericsson is a new supplier to us. Through this training, we find out which information is the most important," says Song Bin, who works for Shangdong Telecom in Southern China.

Broad-based network

The Master of Management in Infocom degree offered by Ericsson China Academy, is a cooperative venture between Ericsson, Fudan University in Shanghai, Lund University and the Norwegian School of Management. Students in this part-time, two-year program will attend classes in Beijing, Shanghai, Stockholm, Oslo and San Francisco.

A real eye-opener

I felt a little ashamed on the way in from the airport to Beijing. What had I actually expected — that I would be met by small, crouching people in blue overalls and gray caps on bicycles, or in straw hats, on their knees in a rice paddy in the middle of Beijing? Embarrassingly enough, that preconception was not far from the truth.

I had envisioned an hour-long wait at passport control, pot-holed streets, dirty gray apartment buildings, and hordes of cyclists on their way home from the factories.

Instead, I found myself amid luxurious private cars and decrepit taxis on a four-lane highway which was built in 1996. Here, as in the U.S., there were tolls, and the highway was lined with advertisements; including Ericsson's best-selling GH 398 phone, complete with Chinese characters. Passport control had taken exactly three minutes and 45 seconds. And outside, there were taxi drivers with the same scandalous fares as in any city in the west. And there was construction. Where there wasn't already a modern skyscraper with a mirrored exterior, one was being built. Even though inflation has been brought under control to some extent, the sense of an overheated economy still prevails.

Politicians sound the same here as they do at home. Small companies should be promoted because that is where new jobs will be found. And with the newly elected prime minister, Zhu Rongji, who is well-known for his economic reforms, the tone is likely to remain the same in the future.

The "hot potato" right now applies to the sale of government-run businesses, which need a real shake-up with regards to profitability. And if you ask what is the most important thing in life, the majority of Chinese answer: making money.

The experience was a real eye-opener, to say the least.

I wouldn't make a big deal out of my preconceptions if I didn't think that there were many others at Ericsson with the same dated image of China. Several weeks ago I visited Ericsson Radio Systems' new exhibition of interactive multimedia equipment. The question asked was whether this really was the right way to approach, for example, Chinese customers.

After having seen these older gentlemen digging pop and rock music at Ericsson's New Year's party I am not worried in the least. China is changing. The Chinese are interested in, and want the latest technological developments.

After visiting Beijing and Shanghai, it is no longer a matter of cultural clashes between the old and new world or real hardships that strike you.

It is the similarities that shock when stepping off the plane in Beijing. You see average people who want a family, a home, a car, a stimulating job of their choice, a reasonable salary and a mobile telephone. The question is not if China is changing, but whether we can keep pace with the changes.



MIA WIDELL ÖRNUNG

Ericsson in China experienced its best year ever in 1997. The country rose to become Ericsson's largest market in terms of order bookings. This year has also gotten off to a good start.

January 19 Ericsson receives its largest order in China to date. GMCC, the mobile operator in Guangdong province, contracts Ericsson to expand its GSM 900 network.

Steady flow of orders from China

The order is worth nearly SEK 3 billion. GMCC is China's largest mobile operator with 2.5 million subscribers. Ericsson is the sole supplier of digital GSM and analog TACS mobile systems to GMCC.

January 22 Ericsson announces the signing of a contract with the Jiangsu Post and Telecom Authority (JPTA). The contract is

for an expansion of the operator's GSM network and is worth nearly SEK 1.5 billion.

February 18 Ericsson announces a frame agreement with People's Telephone, one of the new GSM operators in Hong Kong, worth just over SEK 250 million (USD 32 million). The agreement is for GSM 1800 equipment that will be delivered over a

three-year period. People's Telephone began operations in January 1997 and currently has 85,000 subscribers. Network expansion will increase capacity to 300,000 subscribers.

March 16 Ericsson receives an order for SEK 500 million (USD 64 million) in Shanghai. The Shanghai Post and Telecom Authority (SPTA) will purchase Ericsson's GSM 1800 network. The operator's network will have a capacity of 550,000 subscribers when it is in full operation by mid-year.



"The Ericsson China Academy demonstrates that Ericsson is making a long-term commitment to its customers in China," says C.J. Liu, the director of the academy.



Ericsson amateurs raise money for the homeless

■ For the fourth consecutive year, Ericsson employees in Montreal arranged an amateur night in order to raise money for the homeless. Employees displayed their musical and entertainment talents before an audience of 500 friends and co-workers. This year, CAD 4,000 (about SEK 20,000) was raised, which is a new record. When the tra-

dition was started in 1995, employees raised CAD 315. The recipient of the money is the Christian organization "Le Bon Dieu dans la rue." The organization assists the homeless in Montreal. "This year was the best so far. We have never had such a large audience or so many donations," said Marie Eychene, who organized the event.



Employees at Ericsson in Montreal raised money for the homeless by arranging an amateur night.

More news to Ericsson Worldwide

■ Do you have any articles or news tidbits for Ericsson Worldwide? If so, please contact Lotta Muth at +46 8 719 5171, memo LME.LMEMUTH or by e-mail: lotta.muth@lme.ericsson.se



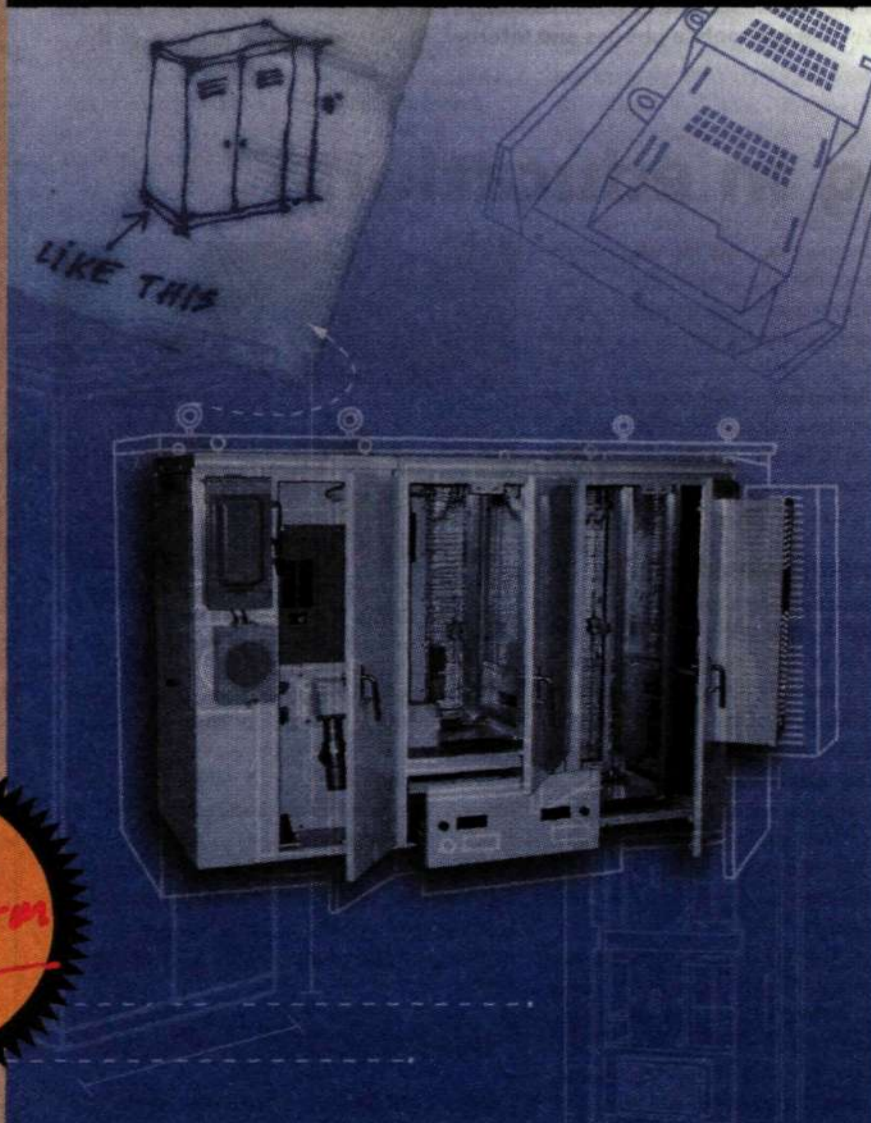
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TECHNOLOGIES INC.



Award for quality and reliability

At the end of last year, Ericsson S.A. in France received the award for "Best Supplier 1997". The prize is for deliveries of power modules from Energy Systems.

Intertechnique, one of the world's largest suppliers of sub-systems to the aeronautics industry, presented the award. The award is given in recognition for quality, and de-

livery ability. Ericsson S.A. was chosen after having had 100-percent delivery precision, and 100-percent quality during 1997.

The basis for this success is joint efforts by Energy Systems in Kalmar and Kungens Kurva, Sweden, and Ericsson S.A. in Paris. By constantly checking order flows and through constructive forecasting, they have enabled Ericsson S.A. to be presented with this award, the first of its

type for Energy Systems in France.

Energy Systems' power module production unit has always had the goal of establishing a customer base outside the telecommunication industry. The aeronautics industry, which has even stricter demands on quality and operational safety, represents the kind of customer they would like to have.

CURT ERIKSON

Ted defends his doctoral thesis

On February 13, Ted Johansson, 38, defended his doctoral thesis at the University of Linköping in Sweden. His opponent was associate professor Dag Sigurd, President of the industrial micro-electronic center, Electrum. The topic was transistors, with special emphasis on their use in radio-frequency telecommunications, an exciting topic for Ericsson.

Ted works at Ericsson Components, but is also affiliated with the Institution for Physics and Measurement Technology at the University of Linköping.

In his doctoral thesis, Ted has studied the production and dimensioning of a number of transistor types, primarily those used in mobile radio communication in the frequency area of up to two gigahertz. Telecommunication is currently one of the driving forces behind the study of transistors for higher frequencies.

"My thesis is the culmination of a number of studies which I have carried out during more than ten year's work in research and development within micro-electronics," says Ted Johansson.

Ted's thesis is in observation of the 50th anniversary of the transistor with a historic glimpse into the details concerning the invention of transistors and in-

tegrated circuits.

Ted works with the design of processors and components within micro-electronics at Ericsson Components. For Ted, this area has always fallen within the high frequency radio communication area, an area that is a hot topic of interest.

INGER BJÖRKLIND
BENGTSSON

Visit Ted's homepage:
<http://ourworld.compuserve.com/homepages/ted/job/htm>



Ted Johansson.

Celebrating 25 years of corporation

For 25 years, PBXs (primarily the MD110 along with other customer solutions), have been sold through Ericsson's distributor, ComServ, in Singapore. Many of the large international banks in Singapore have currency trading systems from Ericsson, all sold through ComServ.

The motto of the company is: "We provide the solution to your communications needs."

"ComServ has been one of our most valuable partners during the past decades" says Lars Svensson, manager in charge of coordinat-



ComServ's happy workers show off a banner celebrating their 25th anniversary.

ing sales channels within Enterprise Networks.

"I have the greatest respect for the professionalism and endurance ComServ has shown both within the region and in its cooperation with Ericsson," says the head of Enterprise Networks, Bo Dimert.

To celebrate the anniversary and continued cooperation, more than 120 employees and cus-

tomers got together recently for a party at the world-famous café, Planet Hollywood.

The event also served as a kick-off for 1998, at which ComServ presented the various solutions areas within the Consono-family. Special emphasis was placed on Call Center and Personal Mobility, two strong Ericsson-areas in Singapore.

THORD ANDERSSON

New center for customer contact

In April, a new Ericsson complex will be inaugurated just outside Helsinki, Finland, which will house the entire marketing organization. There will be a total of around 250 workplaces. This is partly the result of an entirely new organization at Ericsson in Finland. The idea is to assign all personnel with external contacts a place in the organization. The strict division between

different units, for example; mobile and fixed networks, will cease. Technical developers and others will remain in the existing complex in Jorvas. The new building has been constructed entirely in accordance with Ericsson's specifications, and is located closer to central Helsinki than the Jorvas complex.



This is where the marketing organization at Ericsson in Helsinki, Finland will be moving.

Ericsson contributes to landfill reduction

Ericsson plants throughout Sweden will be environmentally certified. In the beginning of February, a two-day seminar was held in Kista, outside Stockholm, where over 20 property managers and environmental officers from all over Sweden had the opportunity to learn more about recycling and ecocycle-related matters.

The work with environmentally certifying plants in accordance with the ISO 14001 standard is a process that affects the entire operation. An important part of this is waste management.

A starting point

"Some plants have not yet begun this work, and others, such as Gävle, Falun and Hudiksvall have come a long way. The environmental seminar in Kista served as a starting point for sharing experiences and promoting further work," says Jörgen Hegstrand, environmental coordinator for property management in Sweden.

Experts invited

Environmental experts from different companies were invited to the seminar in order to present environmental work from a larger perspective. Kerstin Brunström, political advisor at the Ministry for the Environment, emphasized that we were now entering a new epoch in regard to waste management. New regulations and provisions concerning producer liability are being implemented within the EU. In Sweden, taxes on landfill waste are expected to

take effect as of July 1, 1998.

"Of course it will be more expensive for the company to handle its own waste instead of putting it in a landfill. But we must view this as an investment in the future," says Kerstin Brunström.

"Environmental considerations must be taken at an early stage, both on a company and individual level. This involves more than waste management and new purification techniques."

Ecocycle facility

Lena Norberg, environmental manager for Ericsson's property company in Kista, spoke about the ongoing work at Ericsson's ecocycle facility in Kista, followed by a visit to some other recycling centers in the Stockholm area.

Increasingly important

"In 1997, 1,160 tons of recyclable waste, including 415 tons of paper and 10 tons of electronic equipment, was sorted in Kista. This type of management is becoming increasingly important, especially from a financial viewpoint, due to future taxes on waste that is deposited in landfills," says Lena Norberg.

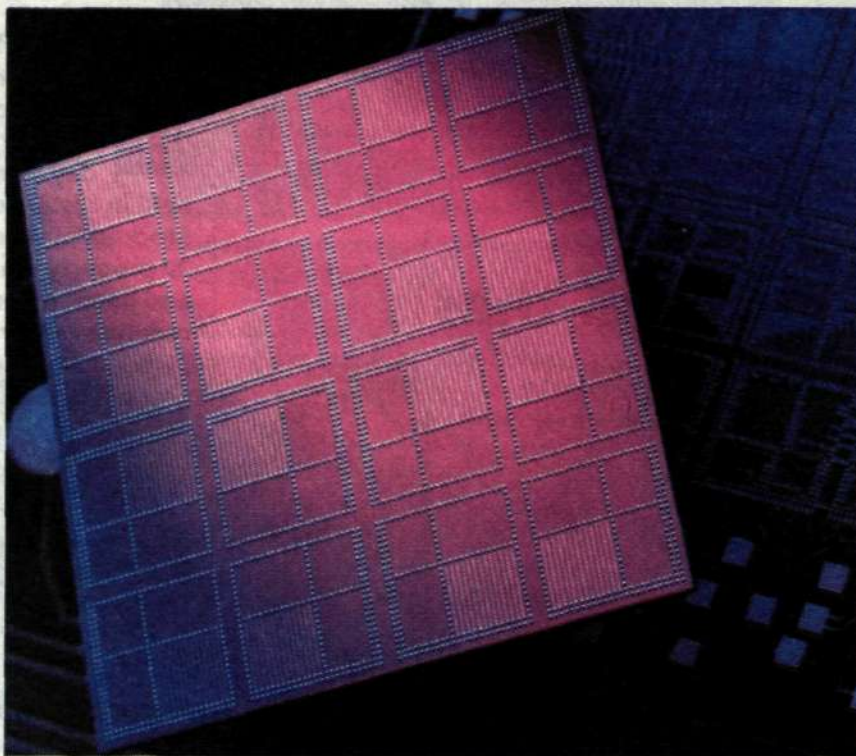
During the spring, Lena will assist various Ericsson plants in Sweden with the construction of environmental and ecocycle stations for recycling. A timetable for environmental certification of the plants in Sweden will also be presented in the spring. It is already certain that property company, which is responsible for new construction within the company, will be certified during the fourth quarter of 1998.

NILS SUNDRÖM



Property and environmental managers from Ericsson plants throughout Sweden learned more about waste management in early February.

INNOVATION IN SURFACE MOUNT TECHNOLOGY...



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AUTOMATION IN ELECTRONIC ASSEMBLY

Prepaid calls provide new customers

Prepaid telephone cards have significantly helped to expand mobile telephony in the Mexican and Italian markets. Total call volumes doubled in both countries in only a year and a half. Today, prepaid accounts for over 50 percent of these markets.

Prepaid was not previously looked upon favorably by mobile telecom operators. But those who invested in it anyway do not regret their decision today.

The prepaid market is expanding worldwide.

"The first target group for mobile telecom operators was creditworthy customers," says Brian Piltz of Subscriber Computing, a prepaid-partner with Ericsson Radio Systems' business unit for the American standard D-AMPS/AMPS.

"But there are also many who do not want to have credit or who do not qualify." Prepaid reaches these groups.

Provides good revenue flow

Customers quickly saw the advantages: no credit checks, no registration, no fixed monthly fees, no billing to keep track of, and no risk of breaking one's budget. It is simply not possible to call too much.

"Prepaid is appropriate for a second or third telephone in a family, enabling full control of costs, one example being chil-

dren," says Dag Arnemo at Ericsson Radio Systems.

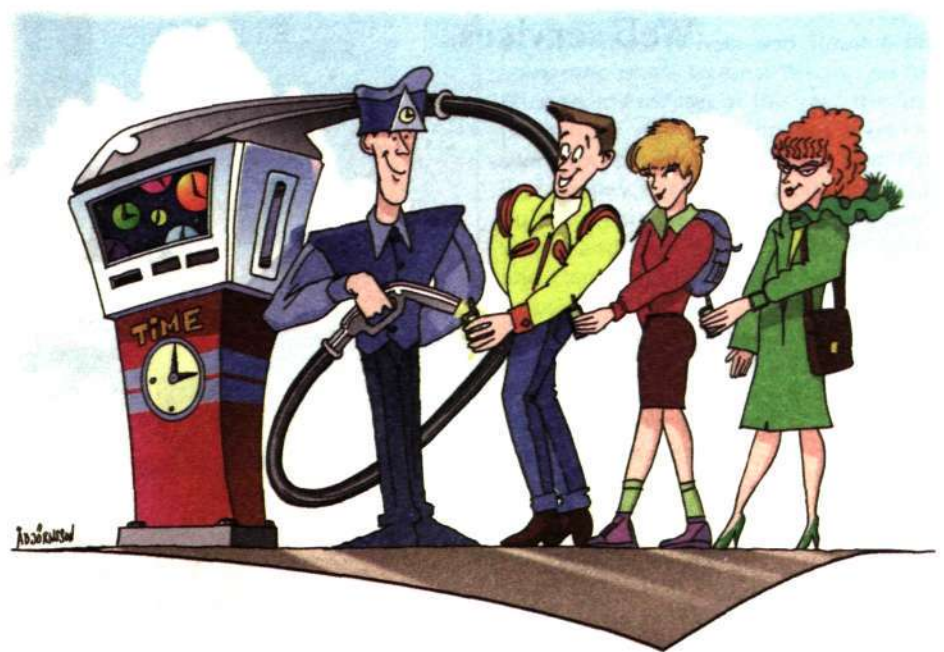
Advantages for operators are also significant. They run no risk of fraud. The lack of billing provides lower costs for administration. Above all, prepaid provides good revenue flow since customers pay in advance. The money comes in directly with no transaction delays or the need to monitor payments. When prepaid was introduced in Mexico, call volumes increased so quickly that it caused capacity problems.

Quicker connections

Ericsson Radio Systems and Subscriber Computing built themselves out of the capacity problem with a new system. The system is the first of its kind in the D-AMPS market (the American system for digital mobile telephony). In addition to building around the bottlenecks in the system, the extra connection time that competitors' prepaid systems require, anywhere from 10-30 seconds, has been reduced to a half second. The success of prepaid in Mexico and Italy are linked to the fact that those economies are based, largely, on cash. Dag Arnemo thinks that prepaid will approach 100 percent of the digital mobile telephony market in such economies.

Growth in Sweden

Even more credit-oriented markets are reacting positively to prepaid. In the U.S.,



More and more mobile telephone users are loading up their mobile telephones with calling time in advance. Prepaid helps to avoid making more calls than one can afford.

Illustration: LEIF ÅBJÖRNSSON

Subscriber Computing is expecting prepaid to reach 20 percent of the market within two years.

In Sweden, Dag Arnemo sees 30 percent as a realistic long-term goal. The prepaid segment of the Swedish digital mobile telephone market reached almost ten percent just nine months after its introduction.

Comviq Cash was launched in March 1997 and had 228,000 customers by year-end. Europolitan Easy started up in November 1997 and had 7,000 customers by year-end. Telia, with 1.2 million regular GSM subscribers, has not yet launched prepaid.

ROGER FALK



Per Flöjt and Jan-Erik Norin rolling up a fiber-optic cable that does not contain PVC but instead uses polyethylene with magnesium hydroxide as a fire retardant.

Environmental goal is achieved

Ericsson is working to get more business units environmentally certified. So far, eight Ericsson units have been certified and 20 more are ready to go.

The plant in Hudiksvall was the first Swedish unit to be certified. Now they are working towards new goals.

"It has become increasingly common for customers to ask us if our cables are manufactured in an environmentally friendly manner, what they contain and if we have

an environmental management system at the plant," says Karin Nygård-Skalman, environmental manager at the telephone cable unit in Hudiksvall.

Last December, Ericsson's cable unit in Hudiksvall received environmental certification according to the international standard ISO 14001. The plant was Ericsson's first Swedish unit to receive environmental certification. Shortly thereafter, the radio base station plant in Gävle became certified.

Currently, a total of eight Ericsson units around the world have been environmental certified. Some twenty others are in the process and many more have plans to implement systems in 1999 or 2000. One of the company's environmental goals is for all operations that affect the environment in a significant manner to have enacted certificate-eligible environmental management systems by the year 2000.

Involved everybody

Preparatory work at the Hudiksvall plant took approximately one year and involved all 600 employees.

The plant established an environmental ombudsman and an environmental board. All employees completed a basic training program. Three people also received several months extra training at college in Hudiksvall university.

Complete inventory

A complete inventory of the facility was made by a specially trained environmental

engineer, in order to identify environmental issues and risks.

The inventory led to a long list of comprehensive goals. Examples of goals that have already been accomplished include phasing out lead-sheathed cables and investigating the possibility of recycling copper cables.

Goals for 1998 include removing lead from paint, significantly reducing the amount of hazardous waste, and investigating how fiber-optic cable should be recycled.

Market demands

Market studies have shown that 80 percent of Swedish customers think it is important to be environmentally friendly, but 98 percent think that delivery time is the most important. Among non-Swedish customers, 60 percent think that environmental concerns are important.

"Until now, we have tried to fulfill current legal requirements. In the future we must stay ahead of them and try to fulfill customers' demands," says Karin Nygård-Skalman. "Our Swedish and Nordic customers, especially, have already included environmental requirements in their project specifications, that we must be able to answer."

They also inquire about things like health and safety issues, and if we are prepared to handle an accident at the plant."

Positive side effects

"Other positive 'side effects' have included increased motivation and creativity among the personnel, and the fact that we have had several pleasant surprises. For example, in regards to waste management, improvements in source-sorting and recycling of packaging materials have saved thousands of kronor every week."



"Implementation of an environmental management system has meant improvements for us in that we can now respond to our customer's continually evolving environmental demands," says Karin Nygård-Skalman, environmental manager at the telephone cable unit in Hudiksvall.

Photo: ULF BERGLUND

LARS CEDERQUIST

The Web must be easy to use. That is the gospel which Jakob Nielsen tirelessly preaches. He is the industry's high priest regarding Web usage and he travels the world over in his crusade for better and more easy-to-use Web services.

A Web crusader



Top-ten mistakes in Web design

1. Using frames

Splitting up a page is very confusing for users and makes it impossible to bookmark the current page. ☹️

2. Gratuitous use of bleeding-edge technology

Wait before using new Web technology until people have had time to upgrade their Web browsers and the techniques have been tested for some time. ☹️

3. Scrolling text, constantly running animations

Moving images distract attention away from the rest of the page. Give users some peace and quiet to actually read the text. ☹️

4. Complex URLs

Web addresses should contain understandable directory and file names. Minimize the risk of typos by using short names with all lower-case characters. ☹️

5. Orphan pages

All pages should indicate which Web site they belong to and include a link up to the home page. ☹️

6. Long scrolling pages

Few users scroll beyond the information that is visible when a page comes up. Critical content and navigation options should be near the top of the page. ☹️

7. Lack of navigation support

Don't assume that users know as much about your site as you do. Provide a site map to let users know where they are, as well as a good search feature. ☹️

8. Non-standard link colors

Unviewed links are blue; links to previously viewed pages are purple or red. Consistency is the key to teaching users what the link colors mean. ☹️

9. Outdated information

Budget for someone to maintain the Web site. Remove old pages and update links. ☹️

10. Overly long download times

Most users lose interest after waiting 10 seconds or more. This point is not last because it is least important, but because most people already know this. ☹️

(Compiled by:
Jakob Nielsen)



Jakob Nielsen points out that many designers forget who they are making their Web pages for. They design them so that their boss will be happy, rather than thinking about the intended user group.

"I have been involved with the functionality of the Web for as long as it has existed, and I can state that we still have the same problems as when the Web was new. Technology changes, but people are the same," says Jakob Nielsen.

He points out that many Web sites are constructed in the same fashion as a company's organizational structure. This may make things easier for the designers, but hardly for users. He is also critical of overly designed pages.

"It has gotten to the point where a black background is a 'cool design'," says Jakob smiling.

Test on people

Jakob Nielsen constantly refers to user testing as a central part of all Web design.

"There isn't any page that cannot be improved after studying how it is actually used. Test all new pages on actual users," he advises.

Those things which you thought were simple, are not always so clear to the user. Jakob Nielsen himself works with user tests at Sun Microsystems. He is also responsible for the functionality of Sun's own Web site.

Nobody reads the Web

Tests have shown that nobody actually reads the Web. Instead, people skim through the text. And if people actually do read word-for-word, it takes approximately 25 percent longer than reading printed text. This means that text written for the Web must be shorter and more concise in order to be skimmable. Also, people quickly tire of meaningless sales talk. Objective, straightforward texts are what people want. People also want to know who is responsible for texts. Authorship is important.

Today, there is such a vast selection of Web sites, that readers are more selective than before. If they get tired, they will just click onto another site. It is Jakob Nielsen's opinion that texts should not be recycled onto the Web.

Many people just copy a page from a printed newspaper or brochure and put it on the net. That doesn't work. The texts are too long.

Always skeptical

Jakob is not a lover of technology, despite his background as a computer engineer. In typical fashion, he uses slides instead of a computer Powerpoint presentation during his lecture. That is because slides always work and they are significantly sharper and more understandable to the audience.

"I am not against technology, but I am always a little skeptical. This pragmatic stance could be a result of my engineering background," speculates Jakob. "We must always realize that the whole Web is a great big compromise that still has a long way to go. But it works. That is why we should use it. Now we are working to make the Web easy to use. The next step will be to make it a joy to use."

The Internet and the Web have developed incrementally.

Jakob views e-mail as the first great breakthrough for the Internet. It was first when people could send e-mail that it appealed to a mass market.

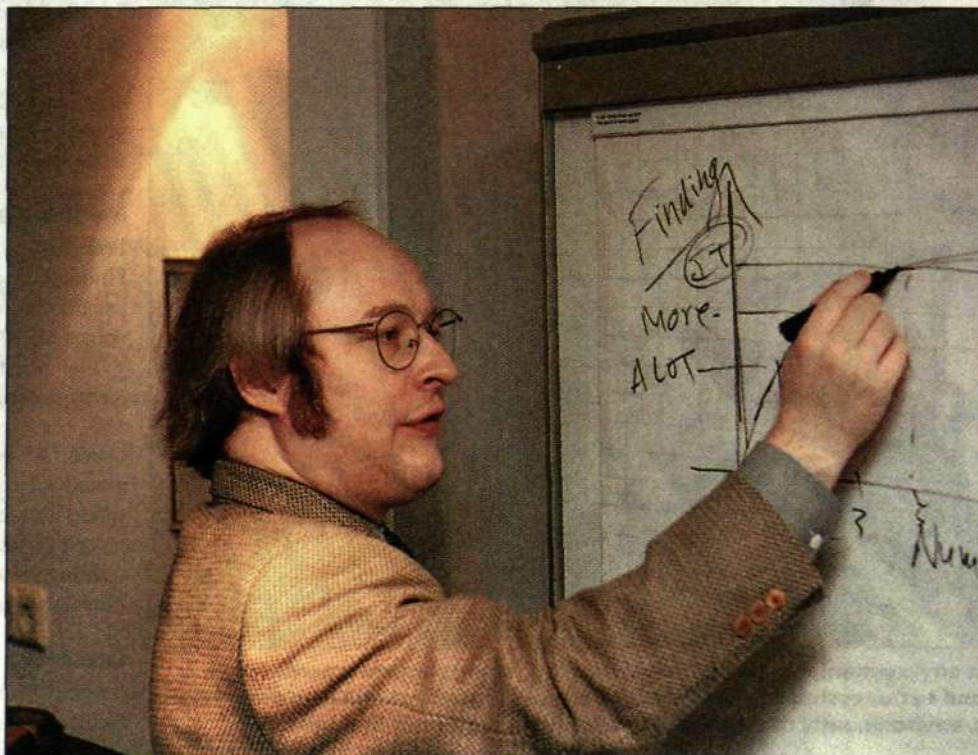
The other great breakthrough, according to Jakob Nielsen, were Web browsers. Prior to 1993, when the first Web browser (Mosaic) arrived, there were only a few users.

The next great breakthrough, or killer application as Jakob calls it, will be mobile access. That will, by necessity, mean smaller screens, which will place greater demands on functionality.

PATRIK LINDÉN

Footnote: At the end of January, a two day Ericsson seminar with Jakob Nielsen was held in Amsterdam. In attendance were over 250 people from approximately 30 different countries, who actively work with the Web. The sponsor was the information department of the parent company, Corporate Relations. Information about the seminar can be found at the following Web page:

<http://inside.ericsson.se/www-proj/seminars.html>.

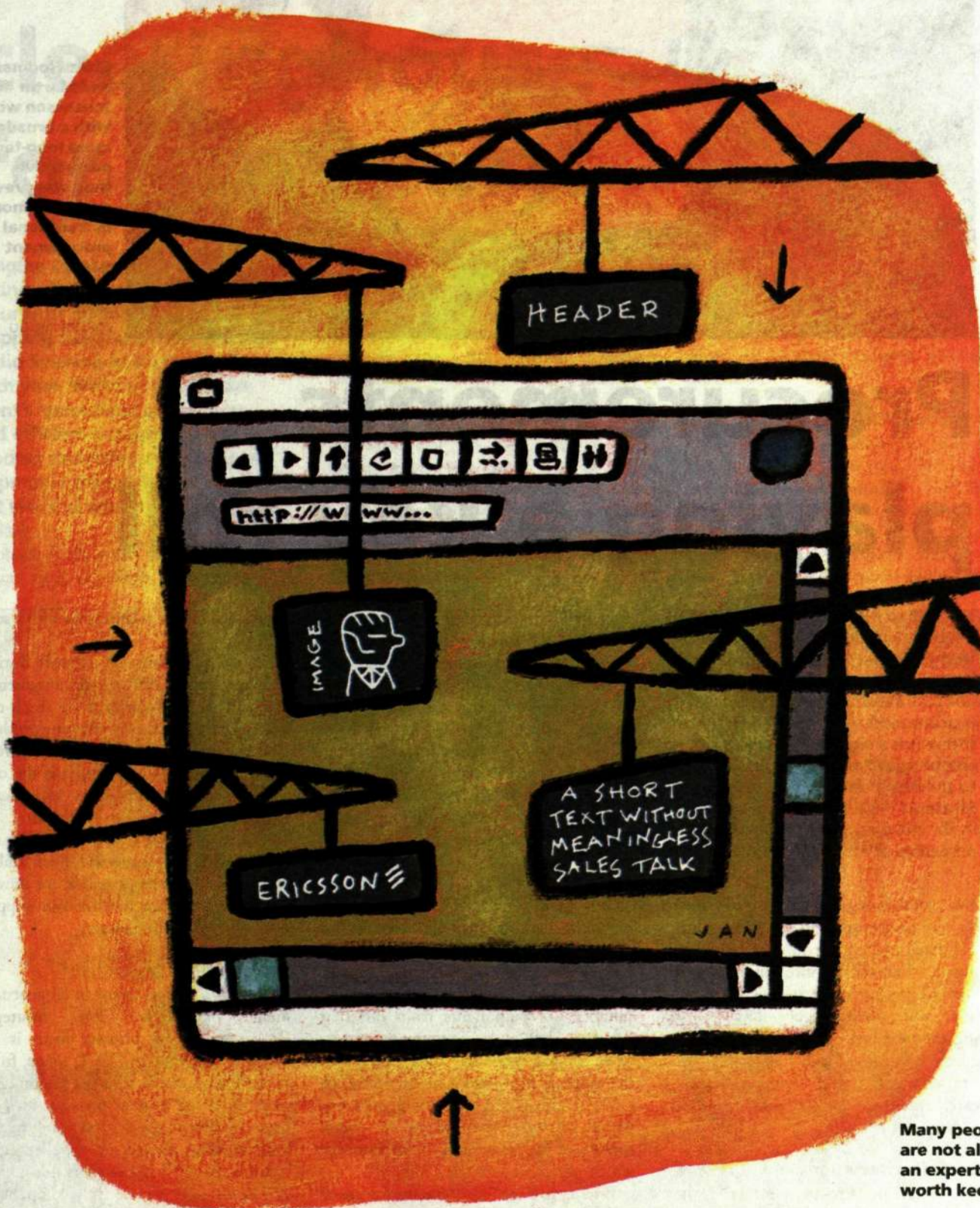


User tests are the most effective way to see how good a Web site is. Jakob Nielsen shows how results from the first person tested are the most useful, the second somewhat less so, etc. In other words, one does not need a giant study to increase the quality of a Web site.

Photo: PATRIK LINDÉN

Jakob Nielsen shows how it should look

■ Those who want to see how Jakob Nielsen has designed his own Web site can look it up at the following address: <http://www.useit.com>. There you can read, among other things, Jakob Nielsen's column about Web functionality. The column, called Alertbox, is published every other week. You'll also find hyperlinks, book recommendations and a few other items for those who are interested in the design of functional Web pages.



Many people design Web pages, but those Web pages are not always very easy to understand. Jakob Nielsen is an expert on Web site functionality and has many ideas worth keeping in mind.

Illustration: JAN OLSSON

Ken and Jeremy maintain order on the Web

■ Now there is help and support for those who create Internet Web pages for Ericsson. In February of this year, the first preliminary design guidelines were issued. You can find them at the Web site listed below. For the most part, the Web guidelines are based on overall company values and policies, such as how logos and the Ericsson name should look and be used.

Jeremy H. C. Bennett and Ken Ryan are in charge, on a corporate level, for Ericsson's image on the Internet and how the company's presence on the Web should be developed.

They emphasize that the current guidelines are preliminary, and they welcome input on the work that they have done so far. The guidelines are directed towards anyone who works in any way on external Internet Web pages. Many of the guidelines are, however, applicable and helpful even for company intranet pages. If you would like to read the guidelines, they can be found at: <http://inside.ericsson.se/www-proj/guide.html>



Jeremy H. C. Bennett and Ken Ryan are the ones responsible, on the corporate level, for Ericsson's appearance on the Internet. The first company guidelines have now been published on the Net as an aid for anyone who contributes in some way to Ericsson's external Web pages on the Internet.

Web design a new and growing occupation

■ A few years ago, Web sites were overseen by enthusiasts who often ruled over both form and content. Today things are different. A new generation of professionals are now working with all aspects of Web sites. Mats Renée is one of them. He coordinates Web projects for the Public Networks business unit within the Infocom Systems business area.

"Everything is so new. If you've worked in the field for six months, then you're considered a veteran," he says. "It is also fun that everyone is so enthusiastic. There are many strong-willed people, sometimes too many."

Mats welcomes the new guidelines for how Ericsson should present itself on the external network, the Internet. He still would like to have a short version of the guidelines and ready-made templates like those that outside agencies use.

"With clear guidelines for a common design, we can put our energies into content instead," he says.

People who visit Ericsson Web sites should immediately realize that they are on an Ericsson page.

"Previously, the company's organizational hierarchy was reflected in how our Web sites were organized. Now we are starting to get away from that, but there is still a great deal of work to do. It is important to continually develop content. For Ericsson, this is extremely important, since we want to be one of the



Mats Renée

players in the field. That is why it is essential for us to have good Web pages. It is easy to generate 'badwill' if pages are poorly managed. Oftentimes, the Web has come second, while more energy has been put into printed materials. Now an awareness of quality is starting to reach out to what is being published on the net." Ericsson still has work to do in order to catch up. Last year, Cisco had sales of SEK 24 billion over the Web. Ericsson does not yet have a very good system developed for commerce over the net.

It is Mats Renée's opinion that it is easy to get people to like the Web, but much more difficult to get in contact with someone who is prepared to answer questions that are generated in response to the Web.

PATRIK LINDÉN

NEWS FROM MOBILE SYSTEMS

column

Procurement – for greater profitability and competitiveness

Traditionally, the roll of procurement has been to supply our plants as efficiently as possible. With the quick growth that we have experienced, this task has come under greater scrutiny in recent years. In order to continue to be successful, we must strengthen our business-oriented focus. Profitability and competitiveness are what control our operation. Just as these are some of the key words for our business area, they also exemplify the work that approximately 500 employees in and outside Sweden do with procurement, logistics and shipping. These people handle a rather significant procurement volume of SEK 40 billion per year.

Procurement has played a very important roll in achieving our profitability goals. We must constantly improve our own product development so that we can accommodate the latest technologies used by our suppliers. In addition, we must also conduct supplier development programs so that we can meet the increasingly competitive situation in the market.

Our competitiveness very much depends on how well we succeed at these supplier development programs. We need to have a comprehensive view regarding costs, lead times and even environmental aspects. Everything we do must provide added value for our customers. If it does not, then it must be questioned.

Outsourcing as a concept has become more important. This means that if we can become more competitive by procurement a product or service, instead of making or doing it ourselves, then we must consider doing so. In that way, we can further concentrate our work on what we do well, strengthening our competitiveness. We can achieve more with fewer resources.

Our goal, with the strong market position we have today both within systems and telephones, is to make sure that we benefit from this unique position. We must attract the absolute best suppliers, enabling us to provide the market with more competitive products than anybody else. In order to manage this, we must be quick, flexible and cost-conscious. By placing the same requirements on our suppliers, we can make sure that together we maintain our leading position within mobile telecommunications.



Lennart Nilsson
Vice President
Procurement
Mobile Systems



Claes Flodmark and Martin Johansson work with a broader, more long-term perspective than was previously common in traditional procurement work.

Photo:
ANDERS ANJOU

Procurements playing a key roll

More than 85 percent of the parts in a modern radio base station come from external suppliers. This makes it easy to see why Procurement is not just about price and volume. Procurement work that takes place today has a significant impact on competitiveness and profitability into the next century. That is why Strategic Procurement has a key roll in the development of procurement processes at Ericsson Radio Systems.

The procurements that Ericsson Radio Systems make today in microelectronics, software and so forth, can be broken down, schematically, into three parts. For current production, procurement is handled in somewhat larger volumes covering the next one or two years. The procurement needs of individual projects are not so large in terms of volume, but they extend approximately three years into the future.

Continuous revision

For Strategic Procurement, the time frame is even longer, up to five years. This means that business models are needed which can support the continuous revision of competitive requirements, since it is impossible to know exactly what the market conditions will look like in the future or when future products and systems will be ready for delivery.

"We work more long-term and with a broader perspective than what has tradi-

tionally characterized procurement work," says Claes Flodmark, who oversees Strategic Procurement.

Development of methods and models for the procurement process is a very important aspect of the work that Claes Flodmark and his colleagues do. Another challenge is to calculate the value of the immaterial assets that Ericsson and the suppliers control and which are combined in different systems.

Priorities

"The correct pricing of immaterial assets or intellectual property, IP, is one of our priorities," says Martin Johansson, who is responsible for the microelectronics area.

In the past, a product could contain a number of components from different suppliers, but every component had its own, unique function. Today, functions and systems that previously existed on an entire circuit board, now reside on a single circuit. And usually there are several owners of the IP behind the technology which is gathered on the circuit.

Pricing and the requirements for use of internal and supplier IP must therefore be handled carefully. Ericsson must protect company secrets from the suppliers it is working with, even if designers and developers from both companies work closely together on different developmental projects. Nor should pricing be such that a competent supplier cannot recoup its development costs. Finally, Ericsson has to avoid getting itself into an

overly dependent relationship with a supplier.

"Usually, we provide support during procurement for different developmental projects. But the contracts we reach can also affect the status of current production. An example of a collaboration from which we have learned much is the one we have had for ten years with Texas Instruments," says Claes Flodmark.

"The goal of our work – other than reliable suppliers, continued profitability and competitiveness – is that we have a unified appearance towards our suppliers," says Martin Johansson.

Timing critical

Timing is a critical factor in all procurement operations. For Strategic Procurement, the primary focus is on Time To Technology, TTT. Since, from an early stage, there are a large number of ways to bring a new product idea to fruition, procurement must result in the best possible choice of suppliers and technology. This is necessary for a chip or a new function to be truly competitive and be available at the right time. After that, Time To Market, TTM, is the determining factor once a developmental project goes forward into the market. Finally, of course, it is Time to Customer, TTC, that is of importance. At that point, the final results of the work that Strategic Procurement began several years ago can be evaluated.

LARS BÄCK

■ Newly employed technicians and others now have the opportunity to further their education with the help of multimedia. A CD-ROM set with ten basic courses covering, among other areas, mobile telecommunications, is now being launched on a broad scale throughout Ericsson.

Basic coursework on CD-ROMs

The set is called TIME (Technician's Introduction Multimedia Experience) and was launched in a first edition last autumn. Now the course has been revised and is being issued to the entire company.

"We received a great deal

of attention after the first edition, and now we want to reach a greater audience," says project leader Kerstin Hårdelin at the technical competency development unit in Kista. The CD-ROMs contain exercises like how to seek patents, how to operate a

mobile telephone network and the steps involved to go from product development to full-scale production. The course is designed so that participants work in teams and create networks throughout the Ericsson companies, while at the same time freeing them from scheduled classroom instruction.

NEWS FROM MOBILE SYSTEMS

"Of the 50,000 tons of materials that the Central Shipping Department handles, 70 percent of it goes by air," says Stefan Barawil, Thomas Hancock, and Irené Wallén.

Internal clearinghouse for transports

Imagine two large 747 jumbo jets taking off every day. That is the volume of goods that the Central Shipping Department at Ericsson Radio Systems in Kista handles each year. Without the department's specialized competency and efficient support system, both product deliveries to as well as shipments from Ericsson would not work as smoothly as they do today.

"Nobody is interested in flying a few containers back and forth between different

countries". That is what a leading person at a Scandinavian airline said to the media ten years ago. Today he would probably have never said that. Of the 50,000 tons of materials that the Central Shipping Department handled in 1997, 70 percent of that went by air.

"Yes, our volumes are so large that we are the reason that Nyköping, south of Stockholm, was also established as an air freight airport," says Thomas Hancock, manager for the Central Shipping Department.

In addition to Nyköping-Skavsta airport, large volumes of freight are flown in and out of Örebro and Arlanda. In addition to



international air destinations, approximately 25 percent of the total amount of freight is transported within Europe by truck. The remaining 5 percent goes on container ships. All of these transport services are purchased.

From 500 grams to 100 tons

"We oversee freight anywhere from a half kilo in size up to 100 tons. This includes everything from product information sheets to small spare parts to complete mobile telephone systems. We operate as a clearinghouse for transports. During 1997, we oversaw 30,000 imports and 60,000 ex-

port shipments for our 800 clients around the world."

To manage these volumes requires not just knowledge about the fastest and most cost-effective means to transport freight between different destinations. It also requires many skills in trading procedures, import and export regulations, customs issues, letters of credit, transport insurance, etc.

"With regard to purchases, for example, we conduct customs analyses early on and explain which customs declaration forms are required. We function as a support group both for imports and exports."

The Central Shipping Department is an important part of the ongoing work to shorten lead times within Ericsson. In addition to their specialized skills, various computerized support systems have been constructed. This means that electronic exchange of information along the transport route is occurring more frequently.

Electronically

Within Ericsson, information regarding procurement agreements, for example, can be accessed to form the basis for a customs declaration. External booking of transport services and customs contacts is done electronically.

"Of course there are some customs authorities with whom we have to work manually, but things are increasingly being done electronically."

The results of a customer survey showed that many customers wanted more training regarding transport issues. Since Ericsson has expanded rapidly, there are many new colleagues who need basic skills.

"We are currently putting together a training packet which will cover the handling of letters of credit and other important import and export issues."

"But we also serve an advisory function for many travelers, mostly in regards to what sort of documentation is required for entry and exit to various destinations, when they are traveling with various types of spare parts, instruments and the like."

The customer trainer who had his overheads and manuals locked up by Asian customs officials some years ago, no doubt wishes he had contacted the Central Shipping Department first.

LARS BÄCK



The Central Shipping Department can function as a support group for both imports and exports. Here, Thomas Hancock talks with a colleague in the department, Pär Johansson.

Photo: ANDERS ANJOU

NEWS FROM MOBILE SYSTEMS

During the three years that have passed since the Visby plant on the Swedish island Gotland left Ericsson Telecom and became part of the world of mobile telephony, many changes have taken place and more are under way.

"Our core business is volume production, and in order to become even more skilled we are introducing a new organization in which supply, production and Customer Configuration Logistic (CCL) will guide our operations," says Plant Manager Per Lagerlöf.

'Gotlandic' base stations throughout the world

Per Lagerlöf has been the new plant manager since January 1, when he succeeded Tormod Kristiansen, who is now manager of the Gävle plant. Per joined Ericsson in mid-1995 as purchasing manager of the Visby plant on the island of Gotland, Sweden. Earlier, he had worked for the Swedish company Cementa, in both Slite, also on Gotland, and Ghana. His resumé also includes time with Volvo. He thinks that his experience in process industries serves him well in the Visby plant.

When Per describes the plant's new organization that was scheduled to become effective at the end of March and provide a better workflow in the plant, he emphasizes the focus on developing employees' expertise.

Many of the employees have been employed in the plant for a long time, and personnel turnover is low. This has provided continuity, and the climate for improvement programs is very favorable. At the same time, there is a need to increase expertise, and the cooperation with the college in Visby is important.



Lars-Ove Åkerblom (left) is shown here working with Martin Watkinson from Ericsson OMC in Carlton, England. They are working on the RBS 2103 base station, whose production was transferred from Carlton to Visby in a short time.

The institution that was formerly a branch of the Royal Institute of Technology in Stockholm has now become a college and the number of students has doubled. Since the Visby plant has an opportunity to influence the content of certain courses, employees can obtain training that meets the plant's requirements.

Charmed by Gotland

The Visby plant was formerly divided into three product units that, in a way, functioned as three separate factories within the plant. In the new organization, the three product units are disappearing and all production is being organized under a single production manager, Jan Linell, who has just recently been appointed to the job. Jan came to Visby from Gävle three years ago.

"I was responsible for the shifts of the first products - the RBS 882 and 883 base stations - from the Gävle factory here to Visby" he recalls. "It was in the autumn and I was so charmed by Gotland that I moved here myself." Before Jan was named production manager, he was responsible for all logistics in the plant.

Now that he is building up the organization, the guiding principle is "production controlled by customer orders." Jan wants to delegate responsibility, and the idea is that as many of the problems as possible should be solved out on the plant floor.

"Delegated responsibility will result in more attractive jobs," Jan explains, emphasizing the importance of great flexibility on the part of employees.

"We are indeed the world's best at taking over responsibility for products," he says, smiling, and cites the RBS 2103 base station as an example. In November last year it was decided that production of these stations should be transferred from Ericsson OMC's plant in Carlton, England, to Visby. Shipments to Vodafone, the English operator, are already well under way.

Change of systems

"C:M" is the name of the operating system that is used in Mobile Systems' production units today. This will be changed to "C:O" (Control Oracle) and the Visby plant is the pilot unit.

"We are now developing a model showing how C:O is to be introduced, and it will then be possible to use this model in Mobile Systems' ten production units," Lars Bladh, the project manager, explains. The system is scheduled to be placed in operation in the Visby plant on November 1. There are a number of advantages with C:O. It is more user-



The Ericsson plant in Visby is just outside the city's medieval city wall. Visby is the city on Gotland, the big Swedish island in the Baltic Sea

Photo: JENS YTTERGREN



Plant Manager Per Lagerlöf (left) and Jan Linell, Production Manager.

Photo: BERTIL OLSSON

friendly, since it is Web-based and, in combination with on-going process monitoring, it helps to shorten lead times.

Although purchasing personnel will be affected the most by a new system, there will be a major training program in the plant in connection with the system change.

Customer visits

The Visby plant has had a so-called Customer Configuration Logistics Center (CCL) for a year. It has learned a great deal from the Gävle plant, which was the pioneer in this area. Stated in very simple terms, the new feature is that the plant now produces directly to customer orders, rather than based on forecasts, as was the case earlier. The establishment of CCL is part of the basic World Class Supply program.

"The job will be more attractive that the customer is closer and becomes visible in another manner. Now Ericsson's local companies visit us and bring customer representatives with them," says Mikael Keinonen, who is responsible for CCL. With the new organization, upwards of 80 persons will be involved with CCL at the Visby plant. In Gävle, where the concept was first introduced and has been most fully developed, the CCL has approximately 400 employees.

In establishing the new organization, Per Lagerlöf wants to create a base for an operation in which the focus is on customers and shorter lead times. Delegated responsibility is one of the cornerstones, and he thinks that the role of production supervisors can change as a result of training in (new) skills, so that they will be working more as "obstacle removers." He also says that management must do a better job of providing information. All employees should know the plant's objectives and should also be able to influence them. Today, results (of plant operations) are not announced for a month; the ambition is to first shorten the time lag to one week, and then to one day. Quality is the area that will initially be emphasized. Per Lagerlöf cites "the visual plant" as exemplified in the Nynäshamn factory, as a good model.

Changes inside

When Per Lagerlöf talks about future plans for his plant, he includes references to a service-and-repair center and to logistics involving air freight from the Visby Airport as a means of cutting costs and time.

The Ericsson plant in Visby is still referred to popularly as "LM." While the building is the same as during the "LM" period, there have been changes inside the factory - and there will be more.

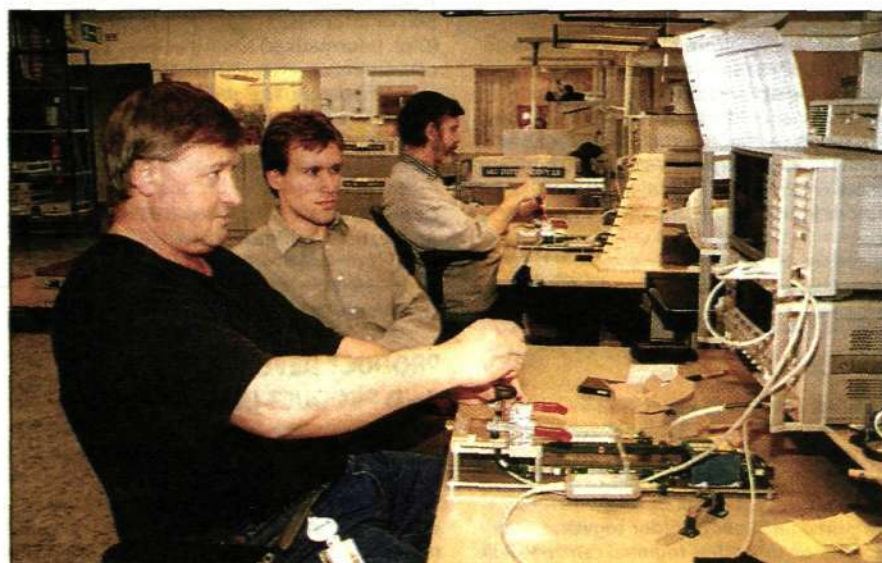
GUNILLA TAMM

NEWS FROM MOBILE SYSTEMS



Claes Östlund applies final testing to an NMT base station that is to be delivered to an operator in Russia.

Photo: BERTIL OLSSON



Rolf Karlsson (left) trims filters for the MiniLink. The Visby plant assists the Microwave Systems Borås factory with this work. Christer Olsson, from Borås, instructs Rolf Karlsson.

Strong sales of NMT 450

In 1997 Ericsson recorded its highest sales to date for the NMT mobile telephone system. Sales of the NMT 450 – the system for which the Visby plant has the principal responsibility for base stations – are notably strong.

Sales of NMT systems are growing, primarily in Russia and Eastern Europe, where 15 new NMT operators were added in 1997. But there is increased interest in the technology in Western Europe as well.

"The NMT 450 provides coverage over a large geographical area at low cost since lower frequencies, as a matter of simple radio technology, mean a longer range," says Olle Ljungfeldt, who is responsible for NMT and TACS systems in the Mobile Systems business area. "That is why the network operator in Norway, for example, decided to develop the 450 network."

The availability of new functions in the system, coupled with increased customer need, point to new successes for NMT systems. Since the technology was launched in 1981, Ericsson has delivered NMT 450 systems to customers in 35 countries.



Björn Carlsson and Christer Söderberg display the last RBS 883.

Photo: BERTIL OLSSON

Approaching one million transceivers

The last series-produced transceivers for the RBS 882 and 883 base stations have now been shipped from the Visby plant. Over the course of years, nearly one million "Basek" transceivers have been produced since 1986, when the first unit was manufactured in the Gävle plant. The transceivers have also been produced in such other parts of the world as Lynchburg, Virginia in the United States, Melbourne in Australia, in the former Orbitel plant in the U.K., and in China.

"There will certainly be follow-up orders for equipment from Visby since the number of stations installed throughout the world is large," says Holger Lange, who has been responsible for the production in Visby.

All employees within the plant were invited to a small celebration marking the end of an important era in the history of the Visby plant.

BERTIL OLSSON

The Visby plant is Gotland's largest private employer

Ericsson started production of electro-mechanical telephone equipment in leased premises on the island of Gotland in 1961. The plant, with a floor area of 32,000 square meters, was built in three stages in 1963, 1966 and 1975. Since the early 1980s the plant has produced transformers as well as subsystems and regional and central processors for AXE exchanges. On January 1, 1995 the plant was transferred from the then Public Telecommunications business area to Radio Communications, which is now the Mobile Systems business area.

The Visby plant today produces base stations and certain parts for base stations used in both analog and digital systems. GSM transceivers for the RBS 2000 base station account for the largest volume of production, while the base station for the analog NMT 450 system is the product for which the plant has total responsibility. The plant also produces parts for the RBS 200 base station. In addition to base stations, the



Sofia Ekedahl enjoys her work as an assembler. She has been employed in the Visby plant for four years.

plant has for several months been engaged in filter-trimming for the MiniLink system that is produced in Ericsson Microwaves' plant in Borås.

The Visby plant has approximately 920 employees.



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Cabinet Seals



vacancies

AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation. They are published in the electronic News system, which is being updated once a week.

For further information about advertising here, send a memo to LME.LMEJOB.

Contact No. 4 1998

Updated March 23

Ericsson Telecomunicazioni S.P.A. Italy

TEST CONFIGURATION MANAGEMENT RESOURCES

● The Global Product Center in TEI (Rome - Italy) is creating a Test Configuration Management team in order to handle its new Product Unit responsibilities.

We are looking for experienced members for this team, in the following areas: Software production. Data transcript. Trouble Shooting. TCM leadership.

Contact: Marie-Claude Schilling, email teimcs@tel.ericsson.se, memold EITA.TEIMCS Application: latest 980430

Ericsson Transport & Cable Networks (BU/ETL), Horsham, UK

ASSISTANT BUSINESS CONTROLLER - TRANSPORT MARKETING

● We are looking for a flexible and motivated person to join our team in Horsham. This role is an excellent opportunity to develop your skills and knowledge within a busy Finance Department.

Main Duties: To co-ordinate and report ETX part of budget, estimates and actuals. Analysis and commentary on the above reports. Special responsibility for co-ordinating system maintenance. Report from a financial perspective on the Business Unit's marketing transport operations, involving feedback and close interaction with the Marketing and Operations departments. Take a proactive part in the transfer of knowledge / competence to local employees within the Finance Department.

Qualifications: Fluent communications skills in English and Swedish. Hard-working with the ability to work under pressure. Able to take on and enjoy responsibility. In-depth experience of ETX financial systems. You will have worked with marketing-related issues and possess an excellent working knowledge of Ericsson consolidated accounting. You will have established an extensive network of contacts within the BN Finance organisation in Sweden. Essentially educated to a higher education standard.

Contact: Mats Thuresson, phone + 44 1483 277505, ETL.ETLTHUR Application: Peter Sheppard, HR Manager. Phone + 44 1483 277566, ETL.ETLPRSD

Ericsson Ltd, UK

ETLIG has overall responsibility for development of the SSF-AM, which is part of Ericsson's IN solution serving all Ericsson mobile applications, CME20/CMS30/CMS40/CMS58. A number of opportunities exist to work with IN for mobile networks within this attractive, fast developing area for a people with IN experience as well as for highly motivated people that want to participate in the SSF-AM development and gain this experience.

ABOUT GUILDFORD

ETLIG is located in Guildford, Surrey. Guildford is a medium sized town in the English countryside but is only 30 minutes from central London by train. Ericsson is the major private employer in Guildford with around 800 employees at present. The area also provides good schools, plenty of opportunities for various recreational activities nearby and Ericsson in Guildford is well known for its pleasant working environment.

TECHNICAL SPECIALISTS

● The SSF design organisation in Guildford is expanding its existing systems group and therefore has opportunities for more Technical Specialists. Overall responsibility for SSF-AM within all mobile applications means that we have to further expand our technical responsibilities in the areas of requirements capture, operational product management (OPM) and in working together with strategic product management (SPM).

Technical Specialists form a part of our systems group and are responsible for ensuring the technical integrity of the SSF-AM system for current and future development.

The Technical Specialist helps specify requirements for the future development of the system. The Technical Specialist also ensures the direction of future development by active participation or a leading role in technical boards which cross the Ericsson organisation. He/she provides expert advice and support to the Ericsson organisation as required.

Qualifications, Experience and Knowledge: IN experience essential. Mobile telephony experience an advantage. Degree in computer science or related science or engineering field or previous relevant software experience. Experience in software design or systems design in line and/or project organisation.

SENIOR SOFTWARE DESIGNERS & SOFTWARE DESIGNERS

● In Guildford, the existing SSF-AM design organisation is expanding and therefore needs highly motivated and qualified senior designers.

Technically the expansion consists of development and support responsibility for the whole of the SSF-AM, in mobile applications.

As a senior designer, you will be involved in all areas of work ranging from early IP phases all the way through implementation, function test in simulated environment and follow-up depending on individual interest and competence.

Apart from technically very challenging work in the IN area, this organisation is also about to embark on working with a new object oriented development methodology.

Qualifications, Experience and knowledge Degree in computer science or related science or engineering field or previous relevant software experience.

At least 3 years experience in AXE software design or systems design preferably in IN and mobile networks.

Contact: Paul Edwards - Department Manager Memold: etl.etlpmx E-Mail: paul.edwardsd@guildford.ericsson.se

IN TESTERS

● We are looking for testers with or without IN experience to work within our test team. Main responsibilities would include undertaking Test specification and Test instruction design and test execution, participating in stability test, troubleshooting. We run our test cases in a real environment as well as in Simulated test environment. You are already an experienced tester familiar with test methods and test environment. Knowledge about AM based AXE structure, Simulated test environment, Intelligent networks, mobile networks are a clear advantage

IN PRODUCT SUPPORT

● If you are experienced with Trouble report handling and Correction handling, we might have a job for you. You will be part of a team responsible for supporting our released products. Main responsibilities include answering TRs, writing and testing ACs and working on CNIs. You will also be involved in supporting our customers during FOA. ESO/FSC experienced engineers can also be suitable for this job. Knowledge about AM based AXE structure, Intelligent networks, mobile networks are a clear advantage

IN TROUBLESHOOTERS

● General responsibility is solving problems during function test execution as well as during FOA activities.

Main task: work together with testers on solving problems on a functional and system level.

As a suitable candidate you should have very good experience in troubleshooting, preferably within IN, very good knowledge of AXE and SFT environment. Experienced ESO or FSC support engineers may also be suitable for this position. Knowledge about AM based AXE structure, Intelligent networks, mobile networks are a clear advantage.

Contact: Zoran Miletic - Function test and product support manager Memold: etl.etlznmc E-mail: zoran.miletic@guildford.ericsson.se

Ericsson Ltd, UK

DESIGNERS & TESTERS BASE STATION CONTROLLER (BSC), GUILDFORD, UK

● We are currently looking for Designers & Testers to join the Development Organisation within the TAS Subsystem.

The TAS (Transceiver Administration Subsystem) is part of the BSC within CME20/CMS40. It is responsible for operation and maintenance of the Base Stations for both RBS200 and RBS2000 families. Overall responsibility for TAS is held in Guildford.

The Development organisation is responsible for Design and Test of the Subsystem from IP through to System Intergration Test.

Previous exposure to the Ericsson Design or Test methodology and AXE knowledge is essential, experience in Ericsson test tools, GSM base systems, Ericsson simulators and team working would be an advantage.

Ericsson Guildford is very accessible, situated 40km south of London on the main London Waterloo to Portsmouth rail line, it is also close to Heathrow and Gatwick airports. Guildford itself, the historic county town of Surrey, provides an excellent mix of old and new attractions.

If you are interested in joining this team and have all or most of these qualities, please contact:-

Contact: David Vaughan Design Department Manager Memo : ETL.ETLDAVA e-mail : david.vaughan@guildford.ericsson.se Phone : +44 1483 305270 Fax : +44 1483 305703 Or Mark Greenwell Function Test & Product Support Manager Memo : ETL.ETLMKGL e-mail : mark.greenwell@guildford.ericsson.se Phone : +44 1483 305699 Fax : +44 1483 305703 Application: Ericsson Limited, Middleton Gate, Guildford Business Park, Guildford, Surrey GU2 5SG

Ericsson Telecom AB, Public Networks, Market Unit Asia-Pacific

"ASIA CENTRE"

● We are looking for a new team!

We are establishing a Regional Centre in Kuala Lumpur, Malaysia, focusing on Access solutions, Multimedia, Datacom and Internet applications. The Centre will be located within the Multimedia Super Corridor together with other Ericsson units. The regional centre will be effective from the 2nd quarter of 1998. The unit will be a catalyst to help our Local Companies in Asia enhance the marketing skills and techniques which are needed for the future. The new unit will be smaller, faster, located closer to the customer, and staffed by specialists representing the competence need for the future.

The unit will initially employ product and solutions specialists who will share their knowledge and experience in respective areas, taking advantage of the latest communication and transport facilities within the MSC concept. The unit shall develop and provide technical support to other Ericsson companies in the whole Asia region. This is a manifestation of our commitment towards our customers in Asia.

Your profile: To meet this challenge we need more of the right kind of people. People with various backgrounds but focus on value based marketing and that can conclude business deals together with our local companies. To be part

of the future success, we need you that have a good knowledge in telecom and computers. You have an ability to not only recognize opportunities, but can create and act upon them. You also enjoy to work intensively in a group and is motivated by responsibility.

To be part of the "Asia-Centre Team" we require that you have a technical degree, and that you are a person who: has a pioneer spirit, is interested in working close to the customer, enjoys working intensively in a group, is fluent in English.

Contact: Magnus Karnsund, Vice President Market Unit Asia-Pacific, +46 8 681 1228, memo: ETX.ETXMGKA (e-mail: magnus.karnsund@etx.ericsson.se) Send your application to: Ericsson Telecom AB HF/ETX/PN/APF Marianne Olsson "Asia-Centre" 12625 Stockholm or by e-mail: marianne.olsson@etx.ericsson.se

Ericsson GmbH, Germany

GSM for railway applications is a rapidly developing and challenging market area with a large number of potential Customers world wide. Ericsson is committed to meet this challenge and is therefore now looking for two (2) competent and experienced Customer Solutions Managers with GSM knowledge to our competence centre for railway applications in Eschborn (Frankfurt am Main).

CUSTOMER SOLUTIONS MANAGER (GSM-R SWITCHING)

● You will be responsible for product solutions within the department Customer Solutions Management covering GSM switching network functionality, technical product realisation and product integration. This task requires detailed knowledge in the areas GSM features for railways, network planning for high availability, data- and speech networks as well as the ability to describe latest information technologies (e.g. internet, electronic commerce, advanced speech features) for customer specific system solutions.

CUSTOMER SOLUTIONS MANAGER (GSM-R BASE STATION SYSTEMS)

● You will be responsible for product solutions within the department Customer Solutions Management for base station controllers, radio base station and radio network planning for high reliability. This task covers the whole spectrum from product requirement definition to design, product introduction and product support activities.

Both positions demand a high degree of customer focus, an independent working style and professional handling of interfaces to customers, other departments and to our headquarters in Sweden. You would fit best into our young team with a degree in telecommunication or Information Systems and Technologies (Dipl. Informatiker) having at least 2 - 4 years of working experience from the telecommunications industry. The ability to communicate in a clear and obvious manner in writing as well as during negotiations in both German and English is required.

Contact: Derek Long, tel +49 6196 400 975. Application: Bettina Karsten, tel +49 211 534 1412.

LM Ericsson Ltd, Ireland

PRODUCT DEVELOPER AND PRODUCT INTEGRATOR

● Are you an innovator? Do you think in terms of solutions? Do you want to be an international team-player?

Within PU Business Communications we are establishing a new unit for design as well as integration of products targeting network operators and their Corporate Customers.

We have strong emphasis on innovation and we operate in a dynamic, expansive and multicultural environment.

We use OO design methods with Java and C++, Visual J++, Visual C++ and others involving objects like DCOMM, ActiveX, Orbix etc, designing products like a Web browser based management system.

We believe You are an open, self-motivated person with the experience above or with the potential and desire to grow. Work experience of 2-4 years is an advantage.

SYSTEM MANAGEMENT ENGINEERS

● Are you interested in managing systems for Business Communications, spanning from IP-based Telephony, Web-based management, GSM Centrex product?

The various systems are based on a number of platforms. This gives a challenging and inter-

esting task, managing them and also being involved in looking at the future planning for how to add products to our portfolio.

Further we are involved in standardisation work, product marketing support, etc. We can customise the role to Your needs.

The overall System Management at the PU is performed via a System Management Network with representatives from all LDCs within the PU.

We believe you have at least 2-3 years of experience in System Management and the desire to work in an international environment.

Contact: Hans Bergstrom +353 1 207 7285; E-mail: Imihob@eei.ericsson.se Application: The Recruitment Manager, PU Business Communications, LM Ericsson Ltd, Beech Hill, Clonskeagh, Dublin 4, Ireland.

Ericsson GMBH, Germany

GSM SENIOR SUPPORT ENGINEER/SUPPORT SPECIALIST

● We are looking for three support engineers with a minimum of 3 years AXE/GSM experience, specialised in either the BSS or the SS area. The successful candidates will be working with a young team in the unit "Service Supply Center", SSC.

Our unit is responsible for all support and supply activities to our customer service centers, CSC. This involves TR analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development. We are also responsible for the acceptance test with the customer, FPA implementations and the roll-out of new software releases.

Our costumers are running one of the biggest GSM network in the world as well as rapid growing fix networks. Being FOA for new releases, we have a very close contact to the development projects within Ericsson. This will give the successful candidate a great opportunity for personal and technical development and work with the latest GSM technique.

You should have a good knowledge of support/supply activities. You will play an active role in providing support/supply and you will advice our local engineers to bould up local competence.

The position can be either expatriate of local employment. Both positions are located in Duesseldorf. Ericsson GmbH Fritz-Vomfelde-Str. 14-18 40547 Duesseldorf

Contact: Mikael Strandberg for the job in the support area, Tel:+49 211 534 2359 MEMO:EDD.EDDMIST, and Stefan Wannhoff for the Supply jobs, Tel:+49 211 534 2289, MEMO:EDD.EDDWANN Application: EDD/H Heike Ganz tel.: +49 211 534 1386 MEMO: EDD.EDDhega

Ericsson GMBH, Germany

UNIX PROFESSIONAL

● Your Duties: Awaiting you is a spectrum of most modern technology from Apache HTTP, SQL/JDBC to NFS Server with inhouse X11 applications and a switch based TCP/IP network.

Your duties involve primarily system administration, user support, training analysis, development of software application/documentation and creative teamwork.

Your Profile: You understand standard UNIX applications, have excellent knowledge of file structure and shell script programming. Experienced in Apache, Netscape and Web page development. Fluent english an asset.

You have the possibility to learn about the largest GSM network in the world and to experience state of the art technology.

We offer international environment, diverse career opportunities, dynamic team, where you will be involved in the development of the exciting world of telecommunications. Interested?

Contact: ERICSSON GmbH (EDD) Fritz-Vomfeldestr. 14-18 40211 Duesseldorf or Stefan Katerkamp, eddskat +49 211 534 2323 Application: Heike Ganz, eddhega +49 211 534.1386

Ericsson GMBH, Germany

PRODUCT MANAGEMENT SPECIALIST (RADIO NETWORKS)

● Main Tasks: He/she works in an "Experimental System Project" based on high frequency radio transmission in a very flexible and strong team oriented way. He/she has technical responsibility for the measurements carried out during the execution phase of the project in order to evaluate radio network propagation and optimise the radio network. He/she should be the primary interface towards the customer and the appropriate ERA project organisation.

In Detail: Measure the quality of the transmission with adaptive bit rate or adaptive bandwidth (speech and multimedia signals). Handling of an experimental system in order to support the measurement of significant radio access parameters. Evaluate the significant parameters of the transmission mode (bandwidth, co-channel interference, adjacent channel interference, guard bands, etc.). Get future experimental experiences in the radio propagation in the 2GHz band. Demonstrate the transmission of Multimedia Services and speech by using a new high frequency based radio transmission technology. Improve the know how and competence building for the Radio Access Technology. Gain knowledge in measuring, observing and optimising the Experimental System. Statistical evaluation of parameters. Work in direct contact with the counterparts from the customer project organisation and from the appropriate project organisation in Sweden.

Starting Date: ASAP

Requirements: Technical oriented engineering degree (Dipl.-Ing.). 3 - 5 years mobile telecommunication experience. Well experienced in handling and maintaining telecommunication systems. Good knowledge in high frequency based radio transmission technology, spread spectrum technology, etc. Extraordinary communications skills, good English, a knowledge of German would be desirable. Open minded personality, distinctive teamworker and well experienced with customer manners. Good self-management and personal flexibility.

RADIO NETWORK ENGINEER

● Main Tasks: He/she works in an "Experimental System Project" based on high frequency radio transmission in a very flexible and strong team oriented way. He/she has technical responsibility for the measurements carried out during the execution phase of the project in order to evaluate radio network propagation and optimise the radio network. He/she should be the primary interface towards the customer and appropriate ERA project organisation.

In Detail: Measure the quality of the transmission with adaptive bit rate or adaptive bandwidth (speech and multimedia signals). Handling of the experimental system in order to support the measurement of significant radio access parameters. Evaluate the significant parameters of the transmission mode (bandwidth, co-channel interference, adjacent channel interference, guard bands, etc.) Get future experimental experiences in the radio propagation in the 2GHz band. Improve the know how and competence building for the Radio Access Technology. Gain knowledge in measuring, observing and optimising the Experimental System. Statistical evaluation of parameters. Work in direct contact with the counterparts from the customer project organisation and from the appropriate project organisation in Sweden.

Starting Date: ASAP

Requirements: Technical oriented engineering degree (Dipl.-Ing.). 2-3 years mobile telecommunication experience. Experienced in handling and maintaining telecommunication systems. Basic knowledge in high frequency based radio transmission technology, spread spectrum technology. Good English, a knowledge of German would be desirable. Open minded personality, distinctive teamworker and well experienced with customer manners. Good self-management and personal flexibility.

PRODUCT MANAGEMENT SPECIALIST (BASE STATION SYSTEMS)

● Main Tasks: Technical responsibility within the Department "PRODUCT MANAGEMENT" (EDD/D/P) for the GSM/DCS - BSS and System related product areas. The Product Management Specialist should be capable of taking their own responsibility for products / projects. He/she should have deep technical knowledge and must be aware of all related commercial aspects in the product area. He/she should act as the prime technical interface between customers and product development in Sweden.

In Detail: Support of technical competence towards the customer, marketing and technical responsible for designated products, product lines, features within a System Release. Product Management Planning and - Support. Handling of Product Substitution for product areas. Assist in the prioritisation of requirements. Maintain close contact to the customer, other ERICSSON departments (internal/external) especially Operational - and Strategic Product Management. Specify Market adaptations and follow up development. Create and maintain plans/strategies for customer requirements/functionality. Investigate questions, problems and solutions for Product areas. Contract analysis/Tender review. Maintain knowledge of the Product area and its position in the market place.

Starting Date: ASAP

Requirements: Technical oriented engineering degree (Dipl.-Ing.) 3 - 5 years mobile telecommunication experience. Knowledge of CME 20 and deep technical experience with BSS products. Good communication skills. Customer focus. Team and goal oriented. Fluent in English and knowledge of German would be desirable. Good self-management and personal flexibility.

Contact: ERICSSON GmbH, Human Resources Heike Ganz Fritz-Vomfeldestr. 14-18 40211 Duesseldorf +49 211 534.1386

Ericsson Eurolab Deutschland GmbH, Aachen

The AXE Mobile Network department, within our AMC System House, will reinforce our Test unit for the AXE Mobile Core (AMC). The AMC consists of the core subsystems that are common to the mobile applications CME20, CMS30, CMS40 and CMS88.

The Test unit will have as main responsibilities to perform verification of the AMC product components and have an active role in AMC customer support activities. The unit will furthermore also be responsible for verification project both on main (AMC) as well as subproject level. These projects perform in an international and intra-culture environment and is covering a vast range of development areas at the leading edge of technology, such as ISDN, IN and Internet accesses. To strengthen our activities we are looking for

SYSTEM TEST ENGINEERS

● Your main authorities and tasks are: Definition of the prerequisites to perform a verification of the test object on AMC level in both target and simulated environment. Performance of the Test execution and reporting of the result verification. Trouble shooting.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Furthermore, fluency in written and spoken English is required. Experiences from System Verification/Test are a clear advantage.

Contact: EED/H/R Simon Seebass, Memo-id:EED.EEDSIMS, Dial: +49 2407 575 163 or EED/U/TVC Mats Erlandsson, Memo-id.:EED.EEDMERL, Dial: +49 2407 575 635

AXE Mobile Core TCS development is responsible for design and maintenance for subsystem TCS within AMC and function/system test for AMC. We are looking for a

QUALITY COORDINATOR

● Your task would be to develop, implement and follow-up quality assurance activities during feasibility, design execution and testing phases of TCS subprojects (typical size 30-40 kMhrs). In this task you are part of the subproject management.

You would ensure milestone entry/exit criteria meetings, inspection planning and follow-up. You would attend/plan quality audits and prepare a monthly quality report on the quality assurance activities and quality measurements.

The job also includes involvement in design and test methods on AMC and TCS level, covering methods coordination and exemption requests handling. We are looking for a tester or designer with 2-3 years of experience preferable in the AXE 10 area. As a suitable candidate you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Furthermore, fluency in written and spoken English is required. If you are interested and/or have questions please turn to

Contact: EED/H/R Simon Seebass, Memo-id:EED.EEDSIMS, Dial:+49-2407-575-163 or EED/U/TG Jo Wilke, Memo-id:EED.EEDJOW, Dial:+49-2407-575-399

AXE Mobile Core TCS development is responsible for design and maintenance for subsystem TCS within AMC and function/system test for AMC. We are looking for a

AXE10 SOFTWARE DESIGNER

● We are participating in the execution phase and performing feasibility studies.

To strengthen our capabilities in this area we are looking for an experienced SW designer in the AXE 10 area. You should be familiar with PLEX design methods and be able to perform technical studies as well as preparing technical documentation.

You should be flexible and cope with a dynamic environment. A first experience in UML or SDL would be an advantage.

We are looking for a designer with 2-3 years of experience preferable in the AXE 10 area.

As a suitable candidate you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Furthermore, fluency in written and spoken English is required.

Contact: EED/H/R Simon Seebass, Memo-id:EED.EEDSIMS, Dial:+49-2407-575-163 or EED/U/TG Jo Wilke, Memo-id:EED.EEDJOW, Dial:+49-2407-575-399

Ericsson Ltd, UK

CS022 TECHNICAL TRAINING INSTRUCTOR, HASLEMERE, UK

● This is an opportunity to join a professional Training Team based in the new Training Centre at Haslemere, Surrey, in the UK. It also presents an opportunity to travel to overseas markets, presenting standard and customised training events to customers and Ericsson staff

The role also involves revising courses and assisting in the development of new or customised courses to meet the needs of the customers.

An open, friendly atmosphere, a specialised career plan, rural surroundings and a chance to make a real difference to the business are some of the benefits of this vacancy.

Degree qualification, 2 years' digital comms experience and knowledge of switching, data, SDH and Radio are necessary.

Contact: ALAN MCDERMOTT etl.etlanmt@memo.ericsson.se

CS956 CUSTOMER TRAINING OFFICER

● An opportunity to join a professional Training Team based in the new Training Centre at Haslemere, Surrey in the UK. This role involves delivering standard technical training courses to external customers at the Training Centre and customer sites, involving extensive travel throughout the UK and therefore a need to be accessible to both Haslemere and London and a willingness to work away from home. Under supervision, will assist in the development of new or customised courses.

Five years' work experience with basic telecomms knowledge, experience of delivering training, knowledge of windows application and the ability to work on own initiative and communicate at all levels is desirable for this role.

Contact: ALAN MCDERMOTT etl.etlanmt@memo.ericsson.se

CS985 TEST PLANT ENGINEER (AXE, MD110 & AIRLINE)

● This role, based in the UK, covers almost all of Ericsson's current telecommunications systems on sale in the UK. It includes, defining and implementing processes and procedures in relation to specification, ordering, installation, configuration and maintenance of AXE10, MD110, ACD, SHD & Airline equipment for training purposes.

Experience of testing or maintaining telecommunications equipment is needed, as is experience of managing a cost budget,

Contact: JOHN GRIFFEN etl.etjgn@memo.ericsson.se Ericsson Ltd, UK

ARE YOU SOMEONE WITH - TECHNICAL TRAINERS ERICSSON TECHNICAL TRAINING CENTRE HASLEMERE, SURREY, UK

● Presence, personality and great communication skills? We're looking for good communicators who come in all shapes and sizes, irrespective of background and who tend to display similar basic qualities. Highly intelligent, quick to learn and curious about people, you will possess a positive and outgoing manner. You work well in a team, but also stand out from the crowd.

We're looking for Technical Trainers who will work with our extensive customer base in the UK and abroad, teaching them how to use our highly flexible systems and products in transmission, switching and mobile telecomms technology. Trainers work closely with our customer, so you will be expected to demonstrate excellent technical and human relations skills. You will also be responsible for course development and customisation. Maintaining a general overview of customer care will also be an important part of your role.

You will have have a good knowledge of Transport Network applications in SDH or PDH or WDM telecommunications networks, applications and systems in GSM, IN, ATM, C7 or Private Networks, probably gained from an engineering role. If you are interested in the chal-

lence of training others in this leading edge technology we would be pleased to hear from you.

As much of our work takes place on client sites, you will be expected to travel extensively within the UK and overseas.

In return you can look forward to a stimulating and challenging role in an unrivalled working environment where you will receive extensive, ongoing training and development.

If you are interested in applying or would like further information about these positions please contact:

Contact: Marie McDonough, tel +44 1403 277556, memoid ETL.ETLMEMH or Emma Knapp, tel +44 01483 407358, memoid ETL.ETLEAKP

Ericsson Telecom Sdn Bhd, Malaysia

PRODUCT MANAGER AND SWITCHING NETWORK DESIGN

● To Customer Division Celcom, Malaysia. Customer: Celcom is Malaysia largest cellular operator with a market share of approx. 50% and more than 1 million subscribers. Celcom currently operates two cellular networks, one GSM network supplied by Ericsson and Lucent, as well as an ETACS network supplied by Ericsson. Celcom is also in the midst of building up a fixed network supplied by Siemens. In recent years Deutsche Telekom (DT) has bought shares in Celcom and they are today influencing decisions within Celcom through DT staff placed in Malaysia.

Job Description: Responsible for Local Product Management of all switching related products as well as Switching Network Design, SND. Depending on customer interest other products may be handled: IN, AUC, Billing Platform, or basically any non-radio related product, and this makes this position extra interesting. The main tasks today are Technical Discussions and Proposals, Technical Presentations and Switching Network Planning & Dimensioning.

Requirements: Good product knowledge in a wide range of Ericsson products, particularly in GSM and preferably also in ETACS. Selfgoing and able to efficiently communicate with customers on technical matters. Previous customer exposure is preferred.

Contact: Inge Bursell, Product Management & SND, Customer Division Celcom, Ericsson Telecom Sdn Bhd. Memo ECM.ECMIBU, Tel +60-3-708 7228.

Ericsson GMBH, Germany

Our section "O&M AND ACCESS SERVICES" within the Customer Service department is looking for YOU as

ACCESS SERVICE ENGINEER

● You have expertise in the V5.1/2 protocol and general experience with signalling protocols. Your main task will be to perform conformance and interoperability tests between this AN and LE interface. Furthermore you will take part in verification test and Type acceptance activities.

Knowledge of ISDN, digital transmission and the LOC product is an advantage. We can offer you a short term contract for about 6 months or a permanent local employment. Start date is asap. In the O&M area we are looking for YOU as

TEAMLEADER O&M SUPPORT.

● You will be responsible for the co-ordination of the support for our products installed in our customers network. You have worked several years with OSS and preferably with XMATE in a support organisation or similar. For this position we can offer you a one year contract with the possibility to extend. Start date should be 1.5. or earlier.

For both positions you will need beside your technical expertise strong planning, co-ordination and communication skills. Both positions are located in Duesseldorf. Ericsson GmbH Fritz-Vomfelde-Str. 14-18 40547 Duesseldorf

Contact: EDD/K/SM Christian Elke Tel: +49 211 534 2315 MEMO: EDD.EDDCE, E-MAIL: EDD-CE@EDD.ERICSSON.SE Application: EDD/H Heike Ganz tel.: +49 211 534 1386 MEMO: ed-dhega

Ericsson de Bolivia Telecomunicaciones S.A., EBB

OPERATIONS MANAGER

● An opportunity for you that want challenges and work in a flexible and dynamic environment. Ericsson de Bolivia is supplying telecommunications equipment and services from all Ericsson's Business Areas to the Bolivian market.

We are looking for an Operations Manager that will lead a department currently consisting of 25 persons. The department is responsible for Project Management, Logistics Management, Engineering, Test and Installation and Local Support of the radio communications activities in Bolivia. The main responsibilities are to lead the department, frequently visit the customer, and to coordinate the operations activities internally as well as with subcontractors and the customers.

Furthermore you should be dynamic and customer oriented, have experience from working within an international, multicultural environment, have good leadership capabilities, and have good interpersonal skills.

You are expected to fulfill these formal requirements: Solid experience in telecommunications. 3 to 5 years of experience from support of mobile telephone systems and/or project management. Good knowledge of the Spanish and English languages.

In return we can offer you a stimulating job opportunity in a young and dynamic organization.

The person we are looking for should be able to start ASAP.

Contact: Magnus Anseklev +591 2 312233; E-mail EBB.EBBKLEV@memousa.ericsson.se or Ulf Malmerberg +46 8 757 2949 Application: Ericsson Radio Systems AB ERA/AH/H Tom Larsson, 164 80 STOCKHOLM

Nippon Ericsson K.K - Japan

SECURITY MANAGER

The IS/IT department is serving all Ericsson users in Japan, close to 850. We are responsible for quality in our wide area network and access to all local area network resources.

We have our operations divided into six responsibility areas, where security is one new established function. We are now looking for a Security Manager who will be responsible for the overall physical and logical security within NRJ.

● ABOUT THE JOB: As a Security Manager you will do and review security audits and work with action plans to improve the security. You will maintain a user friendly and efficient information security according to Ericsson's security policy. Advice and guide NRJ in all kind of security issues. You will represent NRJ in a Security work group and be the receiver of all company information regarding security related issues.

QUALIFICATIONS: You need good knowledge of Ericsson's IT policy and guidelines and a broad understanding of inter networking principles and security issues. Practical experience of "field" security work. You also need practical experience of small project leadership. You must have a service oriented attitude and a true interest in security issues related to modern information technology as well as traditional physical security.

Of course you need good skills in verbal and written English.

Contact: Dennis Keyson, Manager IS/IT, memoid NRJ.NRJDKEY, phone +81 3 3221-8902, Kerstin Halen, Human Resources, memoid NRJ.NRJKERH, phone +81 3 3221-8205. Application: Kerstin Halen, Human Resources, Nippon Ericsson K.K., Kioicho Fukudaya Building, 6-12 Kioicho, Chiyoda-ku, Tokyo 102

Ericsson South Africa (Pty) Ltd

SS AND BSS SYSTEM SUPPORT EXPERT

The Southern African markets are developing rapidly. Ericsson has been very successful in the region. The new networks will be live shortly and will be supported from South Africa.

● To strengthen our support organisation we are looking for one SS and one BSS System Support Expert for a long term contract in South Africa.

OBJECTIVES: To provide technical expert support to Ericsson's customers and Field Support Centre within the coverage of the field support area. To be accountable and responsible for the efficient running of the System Expert function within FSC in order to reach a higher level of customer satisfaction.

RESPONSIBILITIES: To assist in building up the expertise and to transfer knowledge within the department. To make judgement of the most efficient way, technical and economical, to solve a problem. Full reporting shall be done.

MAIN TASKS: To review, develop and improve the procedures in Field Support. To ensure that all activities within the department meet the Ericsson Quality standards. To identify, investigate and report or solve problems of a complex nature in the both hardware and software. To be able to explain highly technical issues to different levels within the organisation.

To be part of the 24 h emergency service if appointed.

REQUIREMENTS: Degree in Electronic Engineering/Telecommunications or equivalent. A minimum of five (5) years relevant experience working in the telecommunications/computing industry where at least three (3) years has been working for Ericsson within testing or customer support of CME20.

System skills (respectively SS and BSS) as good knowledge of e. g. switching, traffic concepts, telecommunications networks, inter-exchange signalling, GSM900/1800 Radio environment (Cell Planning and Fault finding), AXE 10 Operations and emergency recovery procedures and product functional demands.

Have a sound knowledge of the CME20 Switching System, trouble shooting and trouble report handling, CN-A and CN-I handling and correction implementation.

System Expert needs to be familiar with the product structure at a level equivalent to the components of a function block (hardware and software functions).

Knowledge of MIN (Mobile IN) applications and complimentary products as VMS and SMS-C applications is an advantage.

Personal skills as a thorough and methodical approach to work, be able to work as a team member, perseverance in tracing and proving the existence of faults, be flexible and responsive to changing work patterns and demands. There will be a need to travel in Southern Africa at short notice.

Very good knowledge of English is a must.

Contact/Application: Riku Vastela, Memoid ESA.ESARIKU, phone ESA +27 11 283 2000.

Ericsson Eurolab Deutschland GmbH, Aachen

The EEDIXID is the department within Circuit Switching Systems (CSS) system house for system level activities. CSS is responsible for the Switching Systems node in CME20 and CMS40 mobile networks. Here at EED we have the overall Circuit Switching Systems responsibility for CME20 & CMS40. Due to further expansion we are looking for people to work in the system management as

SYSTEM MANAGEMENT ENGINEERS, "CIRCUIT SWITCHING SYSTEMS"

● We are working with the following mobile applications: GSM 900, 1800 & 1900 systems. Global and regional satellite network applications. Studies about GSM MSC evolution. UMTS.

System Management focuses on a range of system level tasks which are necessary to ensure progressive development of Ericsson's CME20 & CMS40 switching nodes. This work involves a broad range of activities including RS writing, system investigations, standardization and system level tasks related to system dimensioning and platform management.

Please refer to the department homepage in the www for further information about the department's activities
"http://www.eed.ericsson.se/services/eed-x-d/welcome.html"

Suitable candidates possess a relevant engineering degree (e.g. telecommunications, electrical, or software engineering) with a minimum of 3-5 years of AXE development or testing experience, and preferably at least 2-3 years of experience in system-level technical development or testing. Experience with GSM or other mobile telephony development is advantageous, but not absolutely necessary. Good analytical skills are essential.

Good cooperation, verbal and written communication skills are important human skills. Experience in working in close customer relations would be advantageous. If you have questions and/or are interested, please refer to your colleagues:

Contact: Pieter van Rijnsoever, tel: +49-2407-575-172, Memo: EED.EEDPVR, Andreas Thuellig, tel: +49-2407-575-246, Memo: EED.EEDANT, Doerte Kaulard, tel: +49-2407-575-163, Memo: EED.EEDDKA (Human Resources).

The AXE Mobile Network department, within our AMC System House, will reinforce our System Integration unit for the AXE Mobile Core (AMC). The AMC consists of the core sub-systems that are common to the mobile applications CME20, CMS30, CMS40 and CMS88.

The system Integration unit will have as main responsibilities to perform integration verification of the AMC product components and have an active role in AMC customer support activities. The unit will furthermore also be responsible for integration verification project both on main (AMC) as well as subproject level. These projects perform in an international and intraculture environment and is covering a vast range of development areas at the leading edge of technology, such as ISDN and Internet accesses.

SYSTEM INTEGRATION & CUSTOMER SUPPORT ENGINEERS

● Your main authorities and tasks are: Definition of the prerequisites to perform a verification of the test object on AMC level in both target and simulated environment. Performance of the System Integration execution and reporting of the result verification. Trouble shooting.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality.

Furthermore, fluency in written and spoken English is required. Experiences from System Verification/Test and/or Customer Support is a clear advantage.

SYSTEM INTEGRATION TEST LEADERS

● Your main authorities and tasks are: Plan, control and report System Integration activities for AMC projects. Initiation and coordination of subproject planning and reporting. Initiation of reviews of the System Integration document. Technical approval of the subprojects System Integration plans and reports. Selection of test environment (simulated or target). Performance entry and exit criteria checks. Coach the team.

As a suitable candidate you have good knowledge of mobile telephone systems, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality.

Furthermore, fluency in written and spoken English is required. You should be familiar with System Verification/Test and/or Customer Support. Previous managerial experience, e.g. as Project leader/Testleader is a clear advantage.

Contact: EED/H/R Doerte Kaulard, Memo-Id: EED.EEDDKA, Tel +49 2407 575 163 EED/U/TV Mats Erlandsson, Memo-Id EED.EEDMERL, Tel +49 2407 575 635

Ericsson Radio Systems AB, Kista

CONTROLLER

The RMOG market in China has increased substantially over the last years both in size and complexity and a suitable organisation is therefore implemented both in Sweden and in China. We have a vacancy in the home organisation for a controller for all Joint Venture (JV) related issues. The unit is a small competent group of people responsible for all issues related to this important investment. The main activities for the group is factory proposals for new activities, negotiations with partners, contact and support to the JV's, business plans and company strategy discussions, deliveries of required material and transfer of technology.

● The main activities for the controller is financial analysis for the JV's, planning and control, participate in budget estimates, periodical closing and material calculations. Give assistance in negotiations with JV-partners and follow up the financial part of the Joint Venture Contracts.

As the issues involved are covering the full spectrum of our business activities. We are looking for a person, preferably with Ericsson knowledge, with experience from several of the involved functional areas.

We believe you are goal oriented, analytical person who takes initiative and have good social skills.

For the position you need to have a degree in business Administration or equivalent education and some years of relevant experience. Fluent in English is a must. The Position will involve some travelling to China.

Contact: Conny Thörnqvist, tel +46 8 404 2714 Application: Ericsson Radio Systems AB KI/ERA/LDH Britt Gustafsson, 164 80 STOCKHOLM

Ericsson Software Technology AB - Karlskrona

New co-workers are wanted to the Business Area - Business Communications at Ericsson Software Technology AB, Karlskrona.

PRODUCT MARKETING OF BMX

● Do you want to be part of an offensive team that actively strives towards developing the BMX's potential and possibilities?

We are an unit within Ericsson Software Technology AB working with BMX, an access product in the Ericsson VPN solution. This work includes marketing of the product towards account managers for global operators, both in Sweden and at Ericsson's local companies.

With BMX - with its strength in protocols and signalling - as part of their net solution, new scenarios open up and enable global operators to connect customers in almost every country.

As technical product marketing manager you will among other things work with: creating and spreading market knowledge, offerings, customer presentations and seminars, contract negotiations, pricing.

You are result and market oriented with a background in telecommunications, preferably with a masters in engineering or industrial economy.

Experience in signalling, net solutions, and marketing is considered an additional qualification.

You are fluent in English, verbally and in writing, and convincing in your communication.

To enjoy working with us you must be able to take initiatives, handle stress, and manage several activities simultaneously.

We work on a global market, and business trips and international contacts are natural activities in this position.

Contact: Roger Svensson, phone +46-(0)455-395 924 Email: Roger.Svensson@epk.ericsson.se or Thomas Remble, phone +46-(0)455-395 271 Email: Thomas.Remble@epk.ericsson.se

Ericsson Telecom AB, Business Unit Public networks

BUSINESS MANAGER

For Intercompany Business Co-ordination China / Asia located in Stockholm.

● We are looking for a market and commercially oriented individual that want to be a part of our team to successfully develop and implement Intercompany business relations for China and possibly additional markets in Asia.

Your main responsibilities will be: Commercial relations with our local companies. This require a knowledge of the various local business situations, as well as knowledge in the business framework that applies within Ericsson. To in co-operation with the companies improve the efficiency of operations. To support the companies within the Business Unit's organization.

We believe that you have: A personal enthusiastic attitude, team working skills and a desire and drive to exceed expectations. Experience or interest in acquiring additional experience in the areas of sales, marketing, finance and/or logistics. Good communication skills in English, preferably also knowledge in other foreign languages. University degree or equivalent in technical and/or economical areas.

Contact: Intercompany Business Co-ordination Christina Westerlind, +46 8 719 3230 ETX.ETX-CHER Claes Elmén, +46 8 719 8489 ETX.ETXCEX Marketing Far East Jan Hellgren +46 8 719 1870 ETX.ETXHEGE Johan Sandberg, +46 8 719 3244 ETX.ETXJHSA Application: Public Networks; Global Marketing, Human Resources Ylva Löfstrand memo: ETX.ETXLYL

Ericsson Radio Systems AB, Kista

Would you like to have a challenging role in our Global Pricing?

PRICING SPECIALISTS

Business Unit Cellular Systems - American Standards (RMOA) is responsible for cellular systems based on the D-AMPS and AMPS standards. Our mobile telephone system, CMS8800, is the most sold system in the world, and our markets around the world are growing rapidly.

● The Pricing Group is responsible for RMOA's global pricing strategy and price management. The group is involved in defining pricing strategies, pricing of new products, deployment of pricing strategies and supporting the sales organization with pricing argumentation, price comparisons and advice. We now need to strengthen our resources and are therefore looking for a pricing analyst:

PRICING ANALYST

● In this position you will analyze Ericsson's as well as competitors' worldwide pricing structures and price levels. You will build up an in-depth knowledge about different markets, trends, underlying business, and technological differences in mobile networks.

Your knowledge will be used to support management, the sales organization, and the pricing group with pricing information and analyses. Finding information, analyzing, and initiate the appropriate actions are key words for your daily work. You will work intensely with computer based models to create price and other comparison models and you will work in close cooperation with sales represen-

tatives and the rest of the pricing group.

We are looking for a person with excellent analytical skills, a good business sense and an affinity with high tech products and services. A university degree, fluency in English and a service minded attitude are required.

Contact: Thomas van Bunningen, phone: +46 8 4049407; or André Lönne, phone: +46 8 7573053; Application: Ericsson Radio Systems AB AH Birgitta Stavenow 164 80 STOCKHOLM Sweden

Ericsson Radio Systems AB, Kista

AREA MANAGER - ASIA-EUROPE

Cellular Systems - American Standards (RMOA) is one of the fastest growing business units within Ericsson Radio Systems. We are the market leader for cellular telephone systems and services based on D-AMPS/AMPS. Today, over 50% of the world's cellular subscribers are served by D-AMPS/AMPS systems.

● We are looking for an Area Manager, who can take on the challenge to further develop our business.

You have completed a university degree (B.Sc., S.Sc. or similar), have at least 3 years working experience, preferably from international system sales, fluency in English, excellent interpersonal and communication skills. Your main responsibilities and tasks will be Marketing and sales activities towards major accounts, commercial and technical support of the local Ericsson companies, frequent visits to the region and formulating market plans.

You will be involved throughout the whole sales process starting with the initial sales activities, tender preparations to contract negotiations and our extensive service offering. You will work in a stimulating small team environment.

Contact: Staffan Hasselrot, phone +46 8 404 3487 or Ulf Engberg, phone + 46 8 404 6621 Application: Ericsson Radio Systems AB, AH/H Annelie Gustafsson, 164 80 STOCKHOLM

Ericsson Telecom AB, Telefonplan

GLOBAL HARDWARE SERVICES MANAGEMENT

Within the department Global customer support services we are offering you the opportunity to work in the fast growing area of services, close together with our MLCILC and customers in an international environment. Our business as product management is focused on developing new hardware services products and initiating supply of services, with both service logistics and commercial focus.

● The unit is in a build-up phase which gives you opportunities to further develop and influence the operation. You will work independently in a global environment and therefore you must have an outgoing personality, good communication and cooperation skills. You have experiences within services logistics, procurement or product management. We think you have a Master degree, preferably in logistics, or equivalent experience. To meet the challenges you will also need the confidence to accept and initiate changes and be prepared to work within in a wide field of tasks.

You will work with the following type of tasks: Development of new hardware services, including processes, methods and tools. Manage and implement the global hardware services strategy. Plan, initiate and support the implementation of Multivendor HW support and sparepart management services. 3rd party vendor contracts. Development of support arrangements for specific customers.

Contact: Michael Humer, tel.: +46 (0)8 719 3904, memoid: ETXT.ETXHUME Manager, Provisioning and Supply HW Services or Jan Giese, Human Resources, tel. +46 (0)8 719 9357, memoid. ETXT.ETXJG Application: Jan Giese, TB/ETX/PN/CS, SE-126 25 STOCKHOLM

Ericsson Telecom AB

GAS OWNER

Configuration Product Management is a unit within Systems/Platform Management at Switching. We are divided in three units responsible for the Configuration Product (GPM), Product Handling (PHM) and Product Specification (CPS).

● We are looking for a Product Owner of our Configuration Products.

You are going to work with the Configuration Product (GAS) from the first ideas through the development project until the product substitution, i.e. the whole life-cycle. The work includes responsibility of the GAS

development, Features, CNG planning, GAS Quality, Product Release criteria and surrounding equipment.

This position requires good knowledge about the AXE system and system handling. Experience of GAS/MAS specification/handling is an advantage. You will have to be flexible, team oriented, and the ability to work under time pressure.

Contact: Ulf Hälleberg ETXT.ETXUULF, CPM mgmt or Susanne Borg ETXT.ETXSUBO, Human Resource.

Ericsson Radio Systems AB, Kista

We are bringing GSM Pro and ROC radio to the market. Join us from the start!

Ericsson Radio Systems AB is looking for people with qualified competence. The newly formed product unit "PMR over Cellular" is responsible for Private Mobile Radio (PMR) functions for our mobile telephone systems. We are currently developing PMR functions for GSM (GSM Pro) and for D-AMPS (ROC Radio). We need to strengthen our resources and are therefore looking for new members.

PRODUCT MANAGER - TERMINALS

● You will research market requirements, define solutions and functions and work out business cases to steer the development of new terminals with PMR functions for GSM and D-AMPS. You will work closely together with our development units in Spain and USA and with Business Area Mobile Phones and Terminals. Customer presentations and new product introductions play an important role in your work. The job involves travelling within Europe and USA.

PRODUCT MANAGER - INFRASTRUCTURE

● You will research market requirements, define solutions and work out business cases to steer the development of new PMR functions for GSM and D-AMPS. You will work together with our development units in Sweden and USA and closely co-ordinate product development efforts with the RMOG and RMOA Business units. Customer presentations and new product introductions play an important role in your work. The job involves travelling within Europe and USA.

Both those positions requires M.Sc. or B.Sc. degree and at least 5 years of experience from marketing or product management of telecom, preferably in the field of cellular communications and private mobile radio. The candidate should have documented experience from working with global teams and preferably have an established network of contacts within business areas BR and BT. Fluency in English is required. The person we are looking for is innovative, market oriented and has a strong drive to achieve the targets.

Contact: ERA/BR/UM/XC Anders Gratorp +46 8 757 08 89 eller ERA/BR/UM/XPC Tore Smedman +46 8 404 65 09

AFTER MARKET MANAGER

● You will have the responsibility to create and implement the After Market strategy for terminals and infrastructure for PMR over Cellular and existing systems and products. The customer interface will mainly be through Local Companies and Distributors. You will set up the interface between the Local Companies and the Support Organisation and you will be involved in setting up best of practices for the maintenance of infrastructure and terminals. Making and/or supporting the maintenance proposals for new bids to customers will also be an important responsibility.

The ideal candidate has a M.Sc. or MBA and at least five years of experience from After Market management in Private Mobile Radio/Cellular Systems or similar areas. The candidate should have experience from work in the international field and preferably have good contacts with other business areas/units' after market organizations. Fluency in English is required. The person we are looking for has a desire and the drive to make After Market a profitable business.

Contact: ERA/BR/UM/X Lars Molin, +46 8 404 82 58 Application: Ericsson Radio Systems AB ERA/F/HS Anette Norberg, 164 80 STOCKHOLM

Ericsson Radio Systems AB, Kista

PRODUCT MANAGER, PRODUCT INFORMATION

Business Unit Cellular Systems - American Standards (RMOA) offers products for cellular and PCS networks in the 800 and 1900 MHz frequency bands based on the digital D-AMPS

standard. Our products are successfully being developed in several countries in North and South America, Asia, and Oceania.

● We have a position open as Product Manager for product information. As such you will be responsible for customer documentation for switching products. You are also expected to keep yourself up to date with new technologies for development and presentation of technical information.

As product manager you work with consolidation of market requirements, product strategies, business cases, life cycle management, and customer presentations.

You have an academic degree, a general telecom background and good AXE knowledge, preferably in operation and maintenance of the switch. You are fluent in English. A background in technical writing and/or knowledge in SGML and WWW technology is an advantage.

The work entails international contacts and requires some traveling.

Contact: Stefan Hasselgren, Phone: +46 8 404 2856, memo ERA.ERASHAS Application: Ericsson Radio Systems AB, AH/H Anette Spångberg, 164 80 Stockholm.

Ericsson Telecom AB, Telefonplan

GLOBAL HARDWARE SERVICES MANAGEMENT

Within the department Global customer support services we are offering you the opportunity to work in the fast growing area of services, close together with our MLCILC and customers in an international environment. Our business as product management is focused on developing new hardware services products and initiating supply of services, with both service logistics and commercial focus.

● The unit is in a build-up phase which gives you opportunities to further develop and influence the operation. You will work independently in a global environment and therefore you must have an outgoing personality, good communication and cooperation skills. You have experiences within services logistics, procurement or product management. We think you have a Master degree, preferably in logistics, or equivalent experience. To meet the challenges you will also need the confidence to accept and initiate changes and be prepared to work within in a wide field of tasks.

You will work with the following type of tasks: Development of new hardware services, including processes, methods and tools. Manage and implement the global hardware services strategy. Plan, initiate and support the implementation of Multivendor HW support and sparepart management services. 3rd party vendor contracts. Development of support arrangements for specific customers.

Contact: Michael Humer, tel.: +46 (0)8 719 3904, memoid: ETXT.ETXHUME Manager, Provisioning and Supply HW Services or Jan Giese, Human Resources, tel. +46 (0)8 719 9357, memoid. ETXT.ETXJG Application: Jan Giese, TB/ETX/PN/CS, SE-126 25 STOCKHOLM

Ericsson Radio Systems AB, Kista

Business unit Cellular Systems - American Standards (RMOA) develops and markets complete wireless communication solutions based on the D-AMPS/AMPS standard. Presently, nearly 50% of the world's wireless subscribers are connected to D-AMPS/AMPS systems.

PROJECT MANAGER - BUSINESS SUPPORT SYSTEM

RMOA is one of the fastest growing Business Units within Ericsson. One of our major challenges is to streamline the processes and the business support systems. Our department's mission is to provide business applications to facilitate world-class IS support for the global RMOA TTC (Time To Customer) process.

● You will be working with the process teams and the users in identifying the most critical information management needs and run projects aimed at implementing new and improved systems. We work with internal and external IS/IT units in the development projects and for maintenance of our systems.

The candidates should have: MSc, MBA or equivalent. Experience from project management, business analysis or system development. Ability to drive projects under tight time schedules and maintain excellent relationships with project members. Good written and spoken English.

Contact: Marie-Josée Leblond, phone +46 8 757 21 63, Application: Ericsson Radio Systems AB AH/H Henrik Bergqvist 164 80 STOCKHOLM

contact

Ericsson, HF/LME/I, Room 811023, S-126 25 Stockholm

A true Ericsson tie connoisseur

Tie designer and former advertising manager at Ericsson, G O Douglas has eleven Ericsson ties. Now he is challenging other Ericsson employees to dig through their closets. He wonders if anybody has more ties than that?

there is a whole pile of ties on a table in his turn-of-the-century apartment in Stockholm. More specifically, eleven Ericsson ties and one Telia tie from a Hotline marketing campaign in the early 1990s.

"Many men used to exchange ties among themselves. We would loosen up the knot, take off the tie and give it to the customer, as a nice gesture."

G O Douglas is the father of the Ericsson tie and the owner of all the ties on the table. When he cleaned out his closet recently, he found a bunch of corporate ties. There were also ties from other companies which he had received or traded, plus eleven Ericsson ties from different time periods and campaigns.

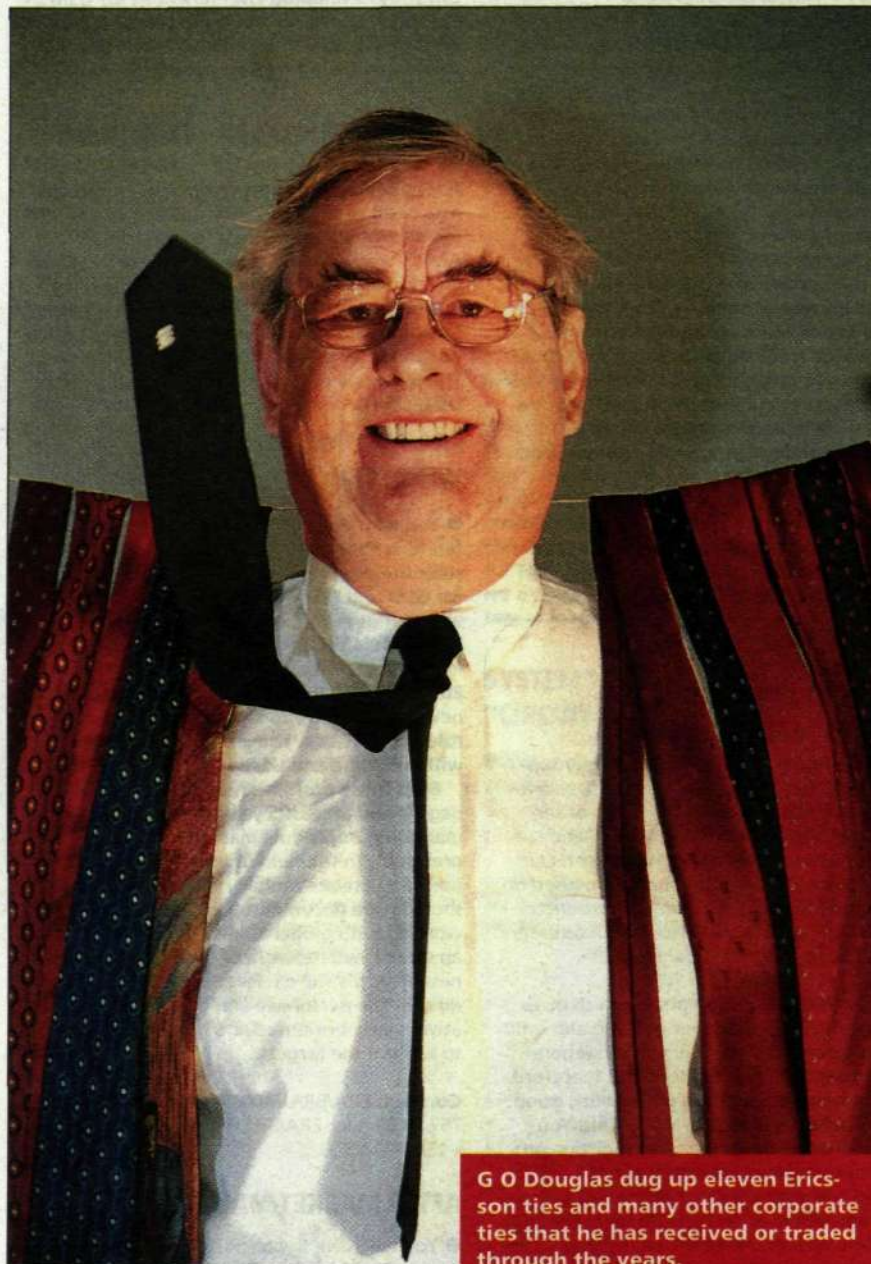
No advertising

In the 1970s, at the start of G O Douglas' tenure as advertising manager of the company, his department did not consist of much more than a photo department, a repro department, an exhibition assistant and the production of a couple of company newsletters. There was no advertising as we know it today and no need for it either. But there were ties.

"It was a big thing when a new Ericsson tie came out. It had to be approved. Every time I developed a new tie, I went to the president and showed him."

Ties with three sausages

The real upturn for the company tie came when Ericsson was working to establish its new logo. G O Douglas was the project manager for work on the "three sausages," an expression for the logo that he would never use himself, but which became its everyday name in Sweden.



G O Douglas dug up eleven Ericsson ties and many other corporate ties that he has received or traded through the years.

Photo: ALEXANDER FARNSWORTH

The ties played a somewhat important role in the work to give the logo recognition. Ties became brand recognition builders. As a result, almost all Ericsson ties after 1982 have the three-sausages logo on them.

"The tie worked perfectly in that regard. We wore it and it was a part of us. It symbolized belonging."

Cherished presents

The Ericsson tie was used at exhibitions and special ties were developed for various campaigns. It also became a cherished present.

"It is a simple thing to break the ice with, to give a tie. But who knows, perhaps that custom is dying out as more and more women are joining the company. It's not quite the same thing to wear and trade scarves."

Now G O Douglas is challenging everyone at Ericsson, or should one say all of the men at Ericsson, to dig into their closets.

"As I said, I have eleven. Is there anyone who has more?"

MIA WIDELL ÖRNUNG

end line

A premature 21st century

Ericsson, like practically all other companies, is very dependent on computers. Computing power is also the driving force behind most of what we produce and sell to our customers. That is why the now well-known year-2000 problem is also a big concern for our company. Much has been said about it, and much is being done to prepare us for that fateful stroke of midnight a couple of years from now, but it is still very difficult to imagine what will transpire on the day it actually happens. Will the world stand still? Or won't it?

Here at the editorial staff, and actually at more or less all of the corporate headquarters as far as I understand, we had a year 2000 drill the other day. It was around noon on Monday, March 16. All computer operations stopped. It wasn't enough that all communication between our computers and with Memo went down, some computers stopped working altogether.

It was in that manner that we got a preview of what the turn-of-the-century might bring. In our department, everyone suddenly sat there unable to do their work, with tons of urgent jobs that didn't get done. The atmosphere seemed unreal. Feelings of resignation – exaggerated by the fact that this was not the first time that the local computer network was out of order – were almost complete. Several people began talking about the impending turn-of-the-century. It has been predicted that all of the functions in society will be paralyzed – not just the most important work tool for the editorial staff.

Now it is just 21 months to go until we are faced with the moment of truth. I truly hope that we will have managed to take all the measures we need to by then. I hope that we have had the time to make the important decisions, and that we will have the courage to take the problem seriously. For Ericsson, it is about being able to deal with customers in a fair way, and I know that people are really working hard on that in different parts of the company.

This will probably be the most definitive exercise to put the customer in focus that we have ever faced. Our experiences on the editorial staff of how certain units handle their internal customers when products or services delivered do not work as promised, are not the very best. In fact, it makes me very nervous to think how we are going to make it through that New Year's night.

We talk so much about putting the customer in focus. To do so, we should not, as some internal suppliers have a habit of doing, assume an attitude that it is the customer who has done something wrong when things do not work properly. Instead, we should humbly assume the full responsibility, promise and actually implement the measures that are required for the customer to be able to rest at ease. Those who do not understand that internal customer relations are just as important as external ones, are out on thin ice.

In which case, our company is done for in a couple of years!



LARS-GÖRAN HEDIN



One Telia tie is among the Ericsson collection. That tie, with a man and a mobile telephone, was the campaign tie Telia used to introduce Hotline to the market in the early 1990s.

G O Douglas' challenge

■ If you have more ties than G O Douglas, you can contact the editorial staff. Perhaps you recall a special story behind one of your ties. Or perhaps you have a very rare Ericsson tie or even the very first one. Call the editorial staff and tell us about it.