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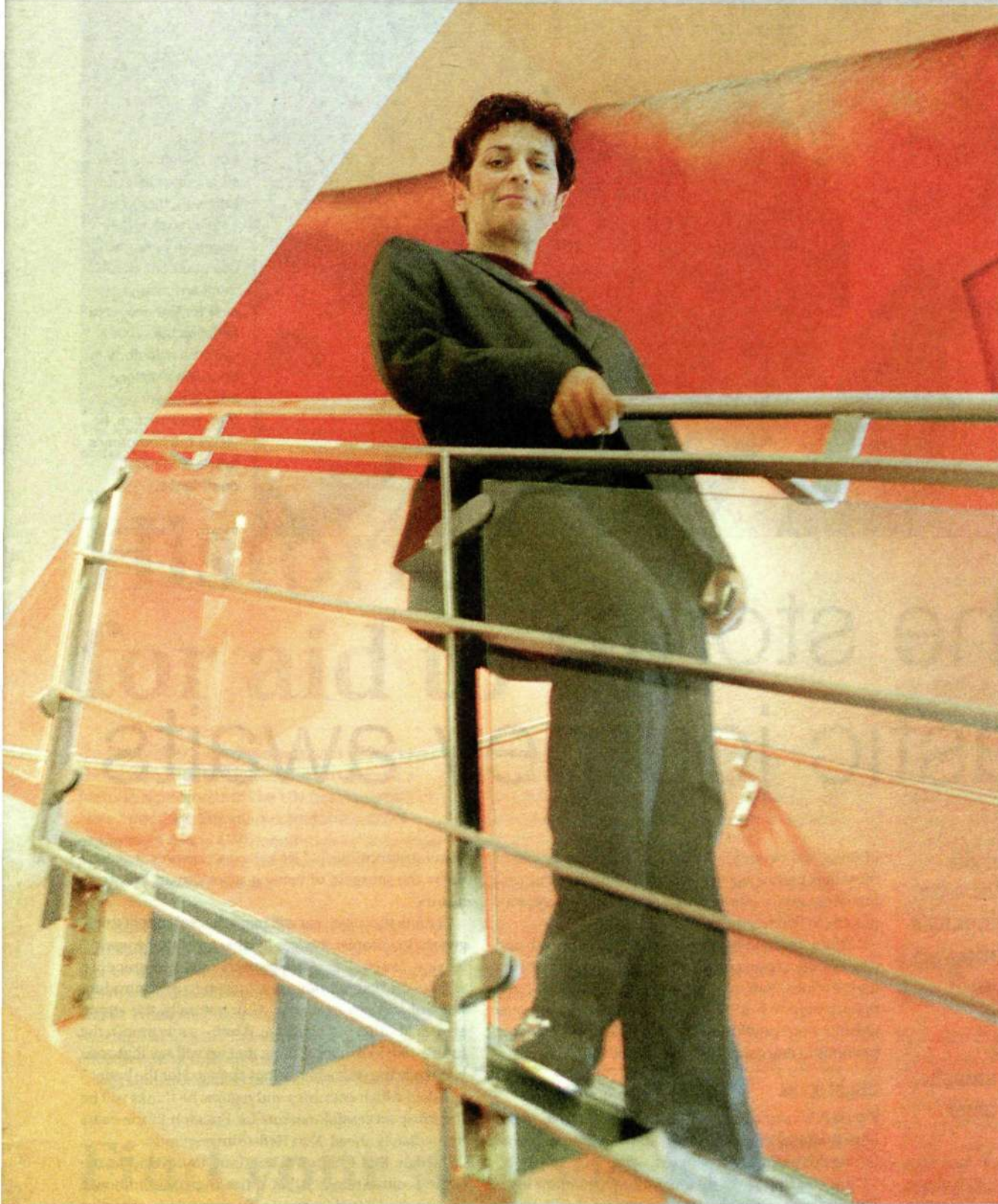


PHOTO: TOMAS BERGMAN

Maria Khorsand aims for the top

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Shares unite employees

4-5



CEO confident about 2002

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2001

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Kurt Hellström, president and CEO of Ericsson, thanks all employees for their diligence during what has been one of the most arduous years ever for Ericsson. He believes that 2002 will be a milestone in Ericsson's history and, in the longer-term perspective, he views the company's future with much confidence.

PHOTO: LARS ÅSTRÖM

After the storm a fantastic journey awaits

It has been a tough year, but the future looks promising for Ericsson. Kurt Hellström thanks the company's employees for their hard work under the very difficult circumstances that now prevail. The downturn in our market will continue for a while, but a fantastic journey then lies ahead, he says.

It has been, to say the least, a turbulent year for Ericsson as well as the entire telecom industry. With only a few days left before the end of the year, Ericsson's President Kurt Hellström can say that 2001 was one of the toughest years in the company's history.

"We have experienced an unusually rapid and sharp economic downturn and have been forced to adapt our operations to the new conditions," Kurt Hellström says. "To adjust the new reality and reduce our costs, we have been forced to examine every sector of the company. Unfortunately, this has also meant that a number of our colleagues have had to leave the company."

Many are finding new jobs

Ericsson today has around 20,000 fewer employees, compared with the size of the workforce just before the company corrected its financial guidance downwards. Half of these employees have been transferred to other companies in conjunction with outsourcing or the sale

of units and companies from Ericsson. A majority of the others participate in one of the "future forums" that the company is offering as a means of helping employees to find new jobs.

"I think that the forums are working very well, and we have already succeeded in helping many employees find new jobs. Naturally, some of them are still engaged in the programs but in light of the success we have seen already, I am confident that the objective of finding new jobs in due course will be reached."

Bright spots

Ericsson is now about to enter a new year. No major organizational changes similar to those that occurred during this autumn are planned.

"It is now important that we fine-tune our new organization so that it can begin to operate and achieve the targets we have," Kurt Hellström says. "We have gained much more operational flexibility and with maybe some minor adjustments to the organization, we are well prepared to address the market challenges."

The slowdown in the telecom industry is expected to last for some time, but some bright spots can already be discerned within the company.

"We are beginning to straighten out our cash flow, but a great deal of hard work remains before it will be completely stable. I am also impressed by the manner in which employees have succeeded in focusing on their work and on business, despite the fact that many employees, I know, are concerned about their jobs. This attitude proves the dedication and commitment of our employees to help strengthen the company."

Kurt Hellström's immediate outlook for Ericsson is

"cautiously optimistic." He believes, however, that 2002 offers the prospect of being a milestone in Ericsson's history.

"I think that next year will mark the real start of third-generation mobile services in large parts of the world," he says. "Japan has already started and in Europe we will see the first roll-outs of 3G networks and introductions of services next year. And, naturally, the strong growth of GPRS will continue. When – some time in the future – we look back, I think that we will say that 2002 was really the year when things changed for the better."

Asked which countries and regions he thinks will be the most successful markets for Ericsson in the years immediately ahead, Kurt Hellström responds:

"I hope that China will continue to develop in the same positive manner that it has shown up to now. I believe the United States can be particularly attractive for Ericsson when the economy turns upward, since we have already secured large market shares there.

"Eastern Europe, Africa and Saudi Arabia are other areas where I expect development in the right direction," Kurt Hellström says.

In a slightly longer perspective, on the other hand, Kurt Hellström is highly optimistic and believes that Ericsson is very well prepared for a future boom economy.

"This is unquestionably the best industry in which a company can operate," he says. "And I am convinced that when things turn upward we will be on a fantastic journey that will last for many years."



The agreement between the UN and Ericsson was signed by Kenzo Oshima, the Under-Secretary-General of the UN, and Ulf Pehrsson, Ericsson's head of public affairs. PHOTO: DENISE DOUCETTE

Historic pact for aid to UN

On December 14, representatives of Ericsson Response and the United Nations signed a historic agreement at the UN headquarters in New York City. Ericsson is to donate GSM equipment to the UN's communications center in Brindisi, Italy. The equipment will facilitate efforts in disaster areas.

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) will receive the equipment. OCHA dispatches aid teams which are the first to reach disaster areas. The GSM equipment will enable emergency relief workers to communicate with their headquarters and improve the quality and effectiveness of their efforts.

Stig Lindström, head of equipment within Ericsson

son Response, explains that the GSM equipment will complement the UN's satellite network.

In addition to mobile telephones, the UN will receive switches for GSM 900, radio base stations and MINI-LINK equipment.

"We will also provide software that will enable UN personnel to use services such as SMS, voice mailboxes and multiple calling services with GSM Pro," says Stig Lindström.

Ericsson has also agreed to train UN personnel in the use of the equipment and to provide maintenance and spare parts for two years.

JESPER MOTT

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Find your way via SMS

SMS services are now available to help you find the nearest ATM, for example. Ericsson and Autodesk of the US recently presented a solution that enables mobile operators to offer their subscribers this type of service via SMS.

By establishing links between Ericsson's Mobile Positioning System, several SMS-gateways and Autodesk's "Location logic", a text-based service is now able to determine users' locations and provide them with the required information.

The user sends an SMS and a reply is generated by matching the question with a database that lists for example, nearby banks, gas stations or other facilities. The ability to offer this service will provide operators with greater opportunities to increase the

utilization of SMS services without having to change the structure of their networks. When Multimedia Messaging (MMS) comes on-line, it will also be possible to receive images, such as maps.

This service is already available and will be marketed and sold to operators jointly by Ericsson and Autodesk. This will take place within the framework of the Ericsson Mobility World cooperation program.

In Sweden, the service is available from operator Telia, but now it will also be possible to benefit from it globally.

GUNILLA TAMM

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Multiservice via IP and first GSM in Colombia

In tough competition, Ericsson has been awarded a contract from Telecom, the largest telecom operator in Colombia. Valued at more than USD 25 million, the contract calls for complete modernization of telecom networks in Colombia, with particular emphasis on remote parts of the country. The contract for the Colombian operator's fixed network includes voice and data via IP and access to the Internet with a unique multiservice solution based on IP telephony, an AXD 305 ATM switch, Tigris routers, MINI-LINK and other equipment. This is the first GSM network for mobile communications in the country.

Implementation of the network modernization program will be started in January 2002 and is expected to be finished in about eight months.

Credit sales bear witness to strong belief in 3G

Ericsson is selling customer credits to a total value of USD 1.5 billion. A large proportion of these credits consist of the financial assistance that Ericsson has provided to 3G customers. Approximately USD 300 million represents loans Ericsson has made from its own capital. The sale of the loans means that the company improves its cash flow for the year by USD 300 million.

The offer for the sale of the credit portfolio was oversubscribed, which suggests a strong belief in the future market for the 3G operators.

The sale is supported by 13 operators and the transaction is expected to be completed before the end of the year.

No alterations to SAR limits

There is no reason to alter the limits for radio waves from base stations and mobile telephones, including SAR limits. This was determined by the scientific committee of the European Commission in a recent report. The facts about radio wave exposure presented since the preceding report, published in 1998, were not considered to require any alterations to the European union's recommendations on radio wave exposure, which are followed by most countries in the Union.

Large new order for Ericsson in China

Sichuan Mobile Communication Company, a Chinese operator, has signed a contract valued at about USD 1.5 billion with Ericsson for the expansion of the GSM/GPRS network in the Sichuan Province. The expansion project is scheduled for completion in June 2002.

The contract also covers the expansion of the Mobile Intelligence Network (MIN), which will enable Sichuan Mobile to provide intelligent solutions such as cash card services, private numbers and private networks. The operator currently serves 4.2 million subscribers.

Lebanese students compete in Mobile Internet

Ericsson in Lebanon is sponsoring a University wide student contest for the best Mobile Internet application software and business concept to be adopted by the Lebanese market. The initiative is called Mobile Internet Initiative to Universities, or Mi2U.

"Ericsson decided to launch this initiative in the country, because Lebanon plays an important role in the region, enjoys a high level of education and has the ability to quickly deploy the latest technology" says Stefan Johansson, president of Ericsson in Lebanon.

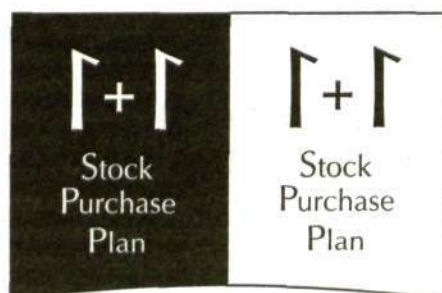


ILLUSTRATION: JOSEFIN W-M

Participation will make Ericsson everyone's business

A company with motivated and committed employees has good prospects for growing stronger.

"We want everyone in Ericsson to have confidence in the company. We believe that the Stock Purchase Plan can help to make everyone feel that this is their business," says Marcus Sheard, vice president, Compensation and Benefits.



The company's performance is usually reflected in the share price. If the company is performing well, the share price generally increases and vice versa. The idea is that the Stock Purchase Plan will encourage the employees to feel long-term confidence in and commitment to the company and that anyone involved will see a relationship between their efforts and their rewards.

"Everyone can affect Ericsson's earnings in how they work. We simply want to strengthen the motivating link between creating better products more efficiently and how much we are rewarded," says Marcus Sheard.

Many major companies have some kind of share or bonus program for their employees.

"However, the unique feature of the Stock Purchase Plan 1+1 is the scale of it. It's worldwide and it's a generous match compared to many other companies. And it's a matter of an independent decision by each of us whether

to participate or not. It isn't paternalistic because it's up to us whether to invest some of our own money first, and Ericsson backing up later with free matching shares. We feel that this design reflects Ericsson's values – respecting peoples' ability to make their own decisions and supporting commitment," continues Marcus Sheard.

The hope is also that share ownership will provide a bond between Ericsson employees throughout the world. However, Marcus Sheard underlines that becoming a shareholder must always be a personal and well-considered decision.

"Share-ownership is always linked with risks. But we believe that this is an extremely good offer and that Ericsson has excellent prospects for becoming a stronger company after recovery from the current crisis.

It is slightly unfortunate, perhaps, that the Stock Purchase Plan is being launched at the same time as many Ericsson employees are being laid off.

"It is also important to take care of and motivate those who remain. If we were to wait to start the share program until the situation is stable, we might have to wait for a long time," explains Carl-Gustaf Leinar, head of Human Resources at Ericsson Sweden.

SARA MORGE

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Risk and reward with stock plan

It is now time for the majority of Ericsson employees to decide whether they want to invest money and become shareholders in the company. Stock Purchase Plan 1+1 is about rewarding anyone willing to make a long-term investment in Ericsson shares. Ericsson will match the number of shares purchased by an employee.

The Stock Purchase Plan begins after the New Year and is aimed at Ericsson employees throughout the world. An information campaign will be launched in December, to help employees decide whether they are willing to invest in Ericsson shares. Investment will either be made with SEK in Ericsson B shares on the stock exchange in Stockholm or with USD in Ericsson ADRs on the NASDAQ exchange in New York.

"You have to consider whether you believe in the future of the telecom industry, the company, and in particular, investments in shares. You should not invest money that you can't manage without," says Anna Surtevall, global project manager for the Stock Purchase Plan.



Anna Surtevall

This is a major decision, which naturally raises many questions. *Contact* has tried to obtain answers to some of the most important questions.

What does matching mean in this context?

Exactly three years after each investment date, Ericsson will match the number of shares you bought on that date. If the money you have saved for the first investment date in May 2002 is sufficient for 30 shares, you will receive 30 shares from the company in May 2005. At the second purchase date, three months later, the money is perhaps enough to purchase 25 shares. You will then receive 25 shares from Ericsson at the second matching, and so on. If you remain employed

with Ericsson for five years after the first investment date, you will have purchased shares on eight occasions and if you have retained your shares, these will have been matched eight times. Ericsson will thus give you the same number of shares as you have purchased.

Can I contribute as much or as little as I want?

You can contribute a maximum of 7.5 percent of your gross base salary each month. The contribution must be continuous and it is therefore not possible to make a few larger contributions instead. Regardless of salary, no employee can invest more than the equivalent of SEK 50,000 per year in the program. The minimum amount varies between countries.

Is this a secure form of saving?

"It's not without risk and we don't guarantee that everyone will gain by joining the Stock Purchase Plan. This is also why we have limited the contribution amount to 7.5 percent of gross salary – any loss must be reasonably proportional to earnings. However, we believe and hope, naturally, that this is something the employees will make money on," says Anna Surtevall.

Can all Ericsson employees join the program?

During the initial round, nearly 79,000 employees in 79 countries will receive the offer. For various reasons, not all companies will be able to offer their employees the possibility to join. For example, Chinese foreign exchange legislation prohibits citizens from transferring money out of the country.

Do I have to enroll from the start or can I join in at a later date?

"No, you don't have to enroll at the launch but first come, first served. We have a total of 35 million shares reserved for the Stock Purchase Plan. We think this will be sufficient. However, if we run out of shares, the contribution period will end earlier," says Anna Surtevall.

What happens if I quit my job at Ericsson?

"If the employment is terminated voluntarily or by cause, your purchase account will be terminated and you are not entitled to future matching. On the other hand, if it is a matter of outsourcing or lay-off due to redundancy, the shares you have will be matched immediately. You cannot continue to make contributions if your employment is terminated during the contribution period," says Anna Surtevall.

When does the share purchase take place?

The shares are purchased quarterly. The first investment date will be in May 2002. Depending on the stock market fluctuations, you can both win or lose on the investment frequency.

"There will be no interest paid by the bank on the contributions between the investment dates. However, in return we have been able to cut down on the administrative and transaction costs," explains Anna Surtevall.

How much of what I save is paid in bank fees?

The bank charges a purchase commission of 0.50 SEK or 0.05 USD per share depending on whether you invest in B-shares or in ADRs. It is slightly more expensive when you later sell the shares, since the minimum fee is approximately 255 SEK or 25.50 USD per sale.

Can I change the contribution amount?

You can stop your contribution at any time. However, you can stop your or resume at any time, this can only be done on two occasions each year, in May and November.

What if I am on extended sick leave or on sabbatical and don't have any income from Ericsson during the savings period? Can I join anyway?

This varies from country to country, depending on local legislation and how the administration of the program has been structured.

Why is an American bank handling the accounts?

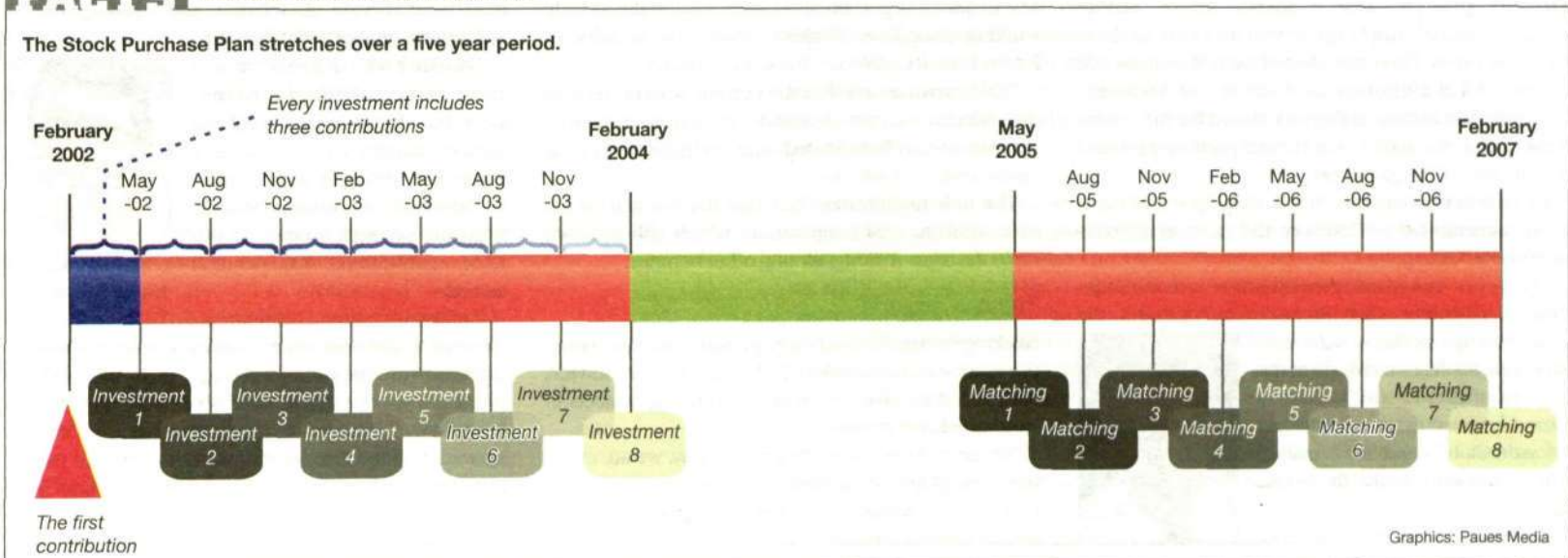
"The reason for our choice of Salomon Smith Barney is that they are large enough to handle this kind of extensive and global administration, with transactions from around the globe. In addition they provide global telephone services through their call centers as well as access to the employee account on the Internet" says Anna Surtevall.

Where do the matching shares come from and who pays for them?

"The matching shares come from a new share issue conducted last spring. The issue involved a total of 155 million shares, 35 million of these will be allocated for the Stock Purchase Plan. In principle, it is the shareholders who are paying for the matching shares the dilution resulting from the new share issue," says Anna Surtevall.

SARA MORGE

STOCK PURCHASE PLAN 1+1



New global customer units

Five Global Customer Units have been formed within the market dimension of Ericsson's organization. As of November 1, these units are responsible for business relations with a number of Ericsson's largest customers. Torbjörn Nilsson, executive vice president, Marketing, and Peter Olson, head of operational development and support for sales and marketing, describe the benefits of this organization.

Why has Ericsson formed these Global Customer Units?

"Ericsson's objective is to have a market dimension that reflects how we are viewed by our customers' organizations. Many of our customers are attempting to expand their operations in countries outside their domestic markets. As a result, we now have a handful of customers with a global presence. That's why we've formed a special customer unit for each of these customers, to enable us to better satisfy their demands for global purchases, agreements and services. We also want to provide them with access to a service organization that can assist them throughout the world."

What criteria did Ericsson apply when selecting global customers?

"One was that the customer had to have a very large business volume and a considerable portion of sales outside the company's traditional domestic market. In most cases, the selected customers also pursue global synergies and strategies and choose their suppliers centrally. The customers that currently satisfy these criteria are Deutsche Telekom, France Telecom, Telecom Italia, Telefónica and Vodafone."

What benefits do Ericsson's global customers gain, compared with our other customers?

"This is not a division into important and less important customers. It is one that enables us to provide the

best possible help to all of our customers, based on their specific conditions. AT&T and China Mobile, for example, are two of our largest customers in absolute terms, but their domestic markets account for the predominant part of their operations. In common with all other Ericsson customers, these two companies will continue to be served by our regional market units in the markets where the customers have operations, because this is the best way we can help them. Our KAM:s (Key Account Managers) are responsible for coordinating international issues for these customers.

Isn't there a risk that customers who did not make the global customer category will feel disappointed and that this will have an adverse impact on Ericsson's business?

"We must avoid the misconception – both within Ericsson and among many of our customers – that a company will not have access to Kurt Hellström if it is not classed as a global customer. That is completely wrong! Customers who require access to Kurt Hellström will get it, regardless of where they are located in the world. That's the way it's always been and that's the way it will stay."

Are there plans to admit more customers into the global category?

"Since the division of customers is dictated by the global presence of the customers concerned, I'm sure that



The introduction of global customers is not a division into more and less important customers. Both China Mobile and AT&T of North America will continue to receive regional support despite being ranked among Ericsson's largest customers, according to Torbjörn Nilsson, vice president, Marketing, and Peter Olson, head of operational development and support. PHOTO: ECKE KÜLLER

new companies will be added while others are removed. For example, if Vodafone were to sell a lot of businesses in order to concentrate on its domestic market, this company would switch to being a major customer that is served by a market unit. In contrast, China Mobile could quickly become a global customer if it acquired a lot of companies in North America."

JENZ NILSSON
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Twelve customer units form Vodafone network

Virtual groups that cooperate across market borders, a global supply agreement and joint projects with customers. These are a few of the tasks conducted by the Global Customer Unit (GCU) for Vodafone. Customer satisfaction is the watchword for the operations of all of the 12 GCU:s in various parts of the world that are part of the global network.

GCU activities in the United Kingdom have now been concentrated in Newbury, the location of Vodafone's Head Office.

"We've just moved into the building next to the Vodafone UK customer office. By not being located in the same building as them, we're emphasizing the fact that we are at the disposal of all twelve units that are currently part of our Vodafone Ericsson Club," says Nils Grimsmo, who is responsible for the Vodafone GCU.

"In practical terms, the new organization has not resulted in



Nils Grimsmo

any major changes, since we were essentially already working along lines similar to those now established for the Global Customer Units," he explains.

Nils Grimsmo says that the current market trend in the telecom sector demands a customer-focused organization with dedicated units for individual global customers.

The new organization has laid the foundation for successful internal cooperation, which will facilitate rapid decision-making, among other benefits.

Running projects

Working on a global basis is important. For this reason, the KAM:s for Ericsson's 12 Vodafone units worldwide, each run their own virtual group, running projects in various fields of expertise.

"By dividing responsibility in this way, we are creating real global cooperation, while simultaneously building networks that cross company borders," Nils Grimsmo relates.

Customer satisfaction is a key concept for Kaj Snell-

man, head of customer relations and business control at Ericsson's global Vodafone unit.

"Working with a global team of client companies differs quite considerably from work involving local customers. We must act in a completely different way in order to derive the maximum benefits from the synergism between our KAM organizations," Kaj Snellman asserts.



Kaj Snellman

Vodafone wants to standardize its work to the maximum extent possible, in order to capitalize on its global coverage and joint venture projects. With this aim in mind, Ericsson and Vodafone have, for example, concluded a global supply agreement for infrastructure, which currently covers infrastructure for 2G and 2.5 G, meaning for both GPRS and 3G.

"Vodafone is a highly competent customer, both technologically and commercially, and we're extremely

network

proud to be the company's main supplier. We must have the greatest respect for Vodafone's know-how and accept our role as supplier. As a result, we'll be able to further develop our role as a business partner," says Nils Grimsmo.

Majority stake in J-Phone

Grimsmo cites 3G and Japan, where Vodafone has recently acquired a majority interest in J-Phone, as the major challenges during the next few years.

"The five 3G contracts that Ericsson and Vodafone have concluded to date have laid a solid foundation for additional orders. Vodafone aims to cement its position as the largest mobile operator in the world. We intend to continue to be the company's largest supplier, while simultaneously expanding our operations into new segments of the Mobile Internet sector," says Nils Grimsmo in conclusion.

GUNILLA TAMM
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More than 20 years of cooperation

What do Ericsson and the British town of Newbury have in common? For one thing, the global operator Vodafone is extremely important to both of them. The company is the largest employer in Newbury and Ericsson's largest customer.

In 1985, Vodafone put the UK's first mobile phone network – an analog Tac system – on stream. The system was supplied by Ericsson and this marked the start of a long-term partnership between the two companies. There is no doubt that this partnership continues to be of great value to both businesses. Ericsson delivered most of Vodafone's 2G infrastructure. Ericsson is the sole supplier of systems equipment to Vodafone UK.

Today, Vodafone is the largest mobile operator in the world, with 200 million subscribers in its worldwide network. After having initially been an exclusively UK-based company, Vodafone initiated its global expansion in 1987 through membership of the various consortiums that were formed throughout the world to bid for mobile phone licenses. Today, the company has interests in 29 countries on five continents.

Germany, where the operator D2 Vodafone has 22 million subscribers, is Vodafone's largest market in Europe. The company that has most subscribers is US operator Verizon, in which Vodafone owns a 44-percent shareholding.

Ericsson has been a supplier for the first, second and now also the third generation of Vodafone's mobile systems. To date, five operators in the Vodafone group have selected 3G equipment from Ericsson.

GUNILLA TAMM

Customer satisfaction key for Cingular

The principal demand placed by Cingular, one of Ericsson's largest regional customers, is that Ericsson helps this company in its efforts to optimally meet its customers' requirements.

The partnership between Ericsson and Cingular has a long history – even before SBC and BellSouth pooled their US-based mobile resources, Ericsson delivered products for these operators' GSM and TDMA solutions. Today Cingular, a joint venture between SBC and BellSouth, with more than 20 million subscribers, is one of Ericsson's ten largest customers. Anders Olin was recently appointed manager of the Cingular account. He believes that the new division between global and regional companies is an essential adaptation to the market situation.

"As a regional customer, Cingular mainly needs support at a local level. Naturally, Cingular wondered at first why it didn't get its own customer unit in the new organization. But after we explained why we have implemented this division and assured them that they will receive at least as much support as Ericsson's global customers, they were fine with the set-up."

"A prerequisite for a successful partnership with regional customers is that they receive their fair share of support and attention from executive management," says Anders Olin. Cingular's CEO and Kurt Hellström have regular meetings, at least twice a year, and it is essential that the company continue to receive such support.

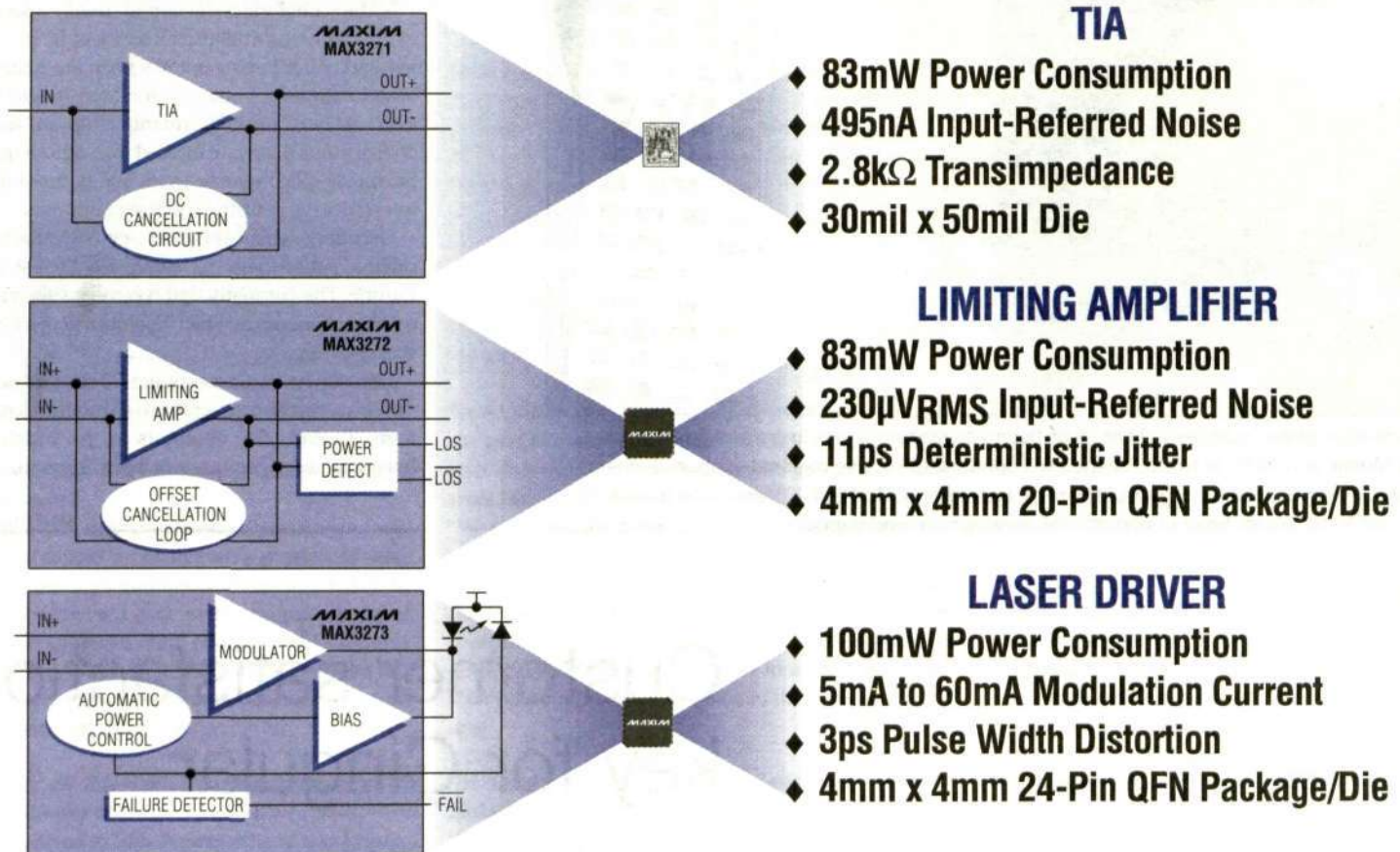
From Cingular's viewpoint, the essential requirement is that Ericsson helps the company to keep its promises to customers. As long as this happens, it is not so important how Ericsson's customer support activities are organized internally. Michael Pietropola, vice president at Networks Operations Support, is extremely satisfied with the partnership.

"Ericsson provides great support on the sales side and its technical expertise is excellent. As far as we're concerned, the most important consideration is that we receive the support we need to satisfy our customers' requirements," says Michael Pietropola.

TONYA LILBURN
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2001 was the year in which 3G at last became a reality in Japan. However, in the rest of the world, the mobile data development was driven by SMS. Mariko Wada, an employee of NTT DoCoMo, is shown presenting one of the operator's 3G phones.

PHOTO: YOSHIKAZU TSUNO, EPA/PRESSENS BILD

AT&T tests wireless video



America's AT&T Wireless want its customers to be able to receive snippets of music videos and sports events via their mobile phones. This is why the operator is currently testing a solution for wireless media streaming.

The company underlines the fact that these are early tests. It has yet to be decided when the service will be offered to customers, writes CNET News.com.

Outside the US, three operators are already testing the same solution from Realnetworks. They are Sonera of Finland, Starhub Mobile in Singapore and Telefónica Moviles of Spain.

Hutchison makes 3G coup

The UK's newest and smallest mobile operator is to rent 3G capacity from BT Cellnet. In this way, the operator will be able to launch 3G in September, three months before its competitors. At the same time, Hutchison will build its own network. The agreement was met with a certain degree of surprise, since many expected Hutchison to choose Vodafone rather than BT Cellnet.

Hello there...



John Fletcher, senior consultant within the Mobile Practice Group at Analysis Consulting, London.

According to you, what was the most interesting thing that happened on the telecom front during 2001?

"Definitely the launch of 3G in Japan. At last we will be able to see how it works. Many people in the industry feared that 3G would arrive far too late and be much too expensive. It was certainly ten months late, but people seem to have forgotten that color TV was delayed by a year when it was launched. I don't think that TV has suffered any long-term damage as a result.

"Another important development is the changed attitude to 3G. When Singapore and Hong Kong auctioned off their licenses this year, interest was considerably weaker than was the case in the UK and Germany in 2000. This is reflected in the hesitation towards 3G that is felt by the market.

"Finally, I want to mention the Sony/Ericsson joint venture. I believe in this, since the traditional mobile equipment manufacturers have lost market share to consumer electronics companies in the past year. Sony and Ericsson complement one another's expertise, which should make this a win-win venture."

What is your prediction for next year?

"I believe that the market will recover, but only if the operators succeed in selling mobile Internet to the mass market. Next year mark the crunch for GPRS. If GPRS fails, it will have consequences for 3G."

ELIN DUNÄS

2001 – a useful year in many ways

With declining share prices and mass lay-offs, 2001 has been a difficult year for the world's telecom companies – but also a period of necessary sobering up. This is the opinion of industry experts with whom *Contact* has spoken.

"The past year has been characterized by global decline, slow growth and the delay of GPRS and 3G. I believe that these factors have collectively helped to reduce the expectations of investors, governments and operators to a more realistic level. It really has been 'the year when we came back down to earth,'" says Catherine Forster Connolly, president of Pyramid Research.



Catherine Forster Connolly

Bengt Mölleryd, analyst at Evli Bank, agrees. He speaks of a Mobile Internet bubble that has burst.

"The Internet boom was to be immediately rerouted and become mobile. This year has proved that developments in application take time and it is an important awakening that has taken place," he says. As a result of the downturn, the operators have begun to focus on profitability.

"Previously, they have run hard to keep pace with demand. They have now had the opportunity to stop and tidy up," continues Bengt Mölleryd.

Germany is a market that entered the arena at a relatively late stage. The increase in mobile subscribers was as high as 105 percent between 1999 and 2000, according to Catherine Forster Connolly. This is unsustainable in the long term, and this year

growth will reach 20 percent. The German mobile operators have thus been able to focus on increasing revenues per subscriber. One strategy involves the transformation of prepaid customers into contract customers.

"This is a trend that we are seeing throughout the world, from Argentina to the Philippines. Contract customers spend more and are therefore important to the operators."

The year has also been dominated by a revised view of 3G. Operators that won licenses in Germany and the UK in 2000 incurred large debts in order to pay the hefty fees. Catherine Forster Connolly believes that the lack of coordination among European governments has led to disastrous results.

"The exorbitant license prices will serve as a future tax for all European subscribers and effectively stall 3G in its track. The efforts of the French government to pay back 80 percent of the fees is, however, an important step in the right direction," she says.

There are certainly other positive signs in the mobile horoscope. SMS is growing strongly throughout the world and text messages account for 15 percent of the revenues of Norway's Telenor Mobil. This shows that mobile data services have a promising future, according to Bengt Mölleryd.

The successes of the past year for SMS provide important keys to the creation of 3G services, Catherine Forster Connolly believes.

"The services must be usable and simple. These are two important lessons we can gain from SMS trends."

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TRENDS IN THE PAST YEAR

- **Back to reality.** Now we have learned that "less is more" and to proceed with less haste.
- **3G became too expensive.** Everyone agrees that license fees in Germany, France and the UK were too high in 2000. This year's auctions in such places as Hong Kong and Singapore, showed that interest in 3G has cooled considerably.
- **Increased specialization.** Operators and tele-

com suppliers were accustomed to doing everything by themselves. Now Ericsson is outsourcing the manufacture of mobile phones and mobile operators are allowing service suppliers into their networks.

- **Necessity is the mother of invention.** Simple text messages provided the data boom and 3G operators throughout the world agreed to share networks.

A series dealing with training programs was begun in the most recent issue of *Contact*. In this issue Maria Khorsand, who heads Ericsson Technology Licensing, tells us about her experiences in management. Here, you can also read a brief description of the training that is required in order to become one of Ericsson's top managers.

Ready for major responsibilities

Maria Khorsand has been through the management training programs that are required in order to become one of Ericsson's 200 top managers. As a manager, she has a strong sense of involvement and high ambitions.

She is driven by a desire to see operations develop and to get the entire organization working toward the same objectives.

Maria Khorsand manages Ericsson Technology Licensing, which was formed last December and develops Bluetooth solutions. Since the operation is fairly new, and the corporate climate more difficult than usual right now, she works very hard – not uncommonly 100 hours a week.

What drives her to devote so much time and energy to her work?

"My driving force lies in seeing operations and the company develop well," Maria Khorsand says. "Getting the entire organization to work toward the same objectives and seeing the employees develop is highly stimulating. Of course, a good salary is also important, but that is not the most important incentive for me.

Steep advancement curve

Maria Khorsand began to work at Ericsson in 1997 as a technician and recognized rather quickly that she had much to offer as a manager. During her first and only personal-development interview with her then manager she joked that she would easily be able to do his job – and his boss's job, too.

"My manager then drew a curve and explained what was required in order to become a division manager. Six months later I became manager of the systems unit in the old Data Network business unit," she notes.

Maria Khorsand thinks that Ericsson's management training programs all maintain a high level of quality, but that the first segment dealing with "Self assessment," was most useful to her.

"There, we learned to understand our own strengths and weaknesses. We worked in groups for a large part of the time and provided each other with a great deal of feedback on how we perceived each other's leadership characteristics. I also acquired a good overview of what

Ericsson is developing. I am still in touch with some of the people I got to know during the course."

"The second course dealt with management development in general. We learned, among other things, that self-knowledge is the foundation for all management. I would like to advise other managers to take this course rather early in their careers, at the same time, or parallel with, their first management job. Personally, I took this course a little late; I was in my third management job and was already familiar with much of what we went through," she continues.

Priority given to customers

One of the things Maria Khorsand wishes and proposes is that the set-up of Ericsson's management-training programs could be a little more flexible, with participants not having to devote several weeks at a time, but instead perhaps spending several days a week, in order to have more time to digest what one has learned. She felt that it was difficult to combine her role as manager with a training course that takes weeks.

"When I took the Ericsson Executive Development course, the second module, I was forced to give priority to a customer," Maria Khorsand recalls. "The course manager was not particularly happy about that. In that case, it would have been helpful if I had been able to take that particular part of the course at another time."

In 1999, Maria Khorsand was asked if she wanted to participate in the Ruter Dam (Swedish for "Queen of Diamonds") executive development program.

This is a forum and a meeting place for women managers, where they gather to exchange experience and inspire and motivate each other. Those who take part in the program work with two mentors, one from their own company and one from an "outside" company. Each



Maria Khorsand, president of Ericsson Technology Licensing, describes herself as "driving," tough, open and warm. "If you are to be a good manager and leader, you have to want to achieve results," she says. "And you must cultivate your strengths, think positively and believe in yourself."

PHOTO: TOMAS BERGMAN

"Kurt Hellström is a great support and provides a useful sounding board for me. He always encourages me to believe in my own ability."

participant is responsible for procuring her "internal" mentor. Maria Khorsand called Kurt Hellström, who was then Ericsson's regional manager for Asia and Oceania.

He thought that mentorship was a good idea, and has been Maria Khorsand's mentor since then.

"Kurt is a great support and provides a useful sounding board for me," Maria Khorsand says. "He always encourages me to believe in my own ability. He has never tried to determine how I should act on any matter. Instead, he describes his own experience – with different customers, for example.

"Kurt's strength as a mentor lies in the fact that he is there when I need to talk with him."

Quality rather than quantity

It is not always easy to find enough time for both work and one's private life, especially for a manager. When it comes to time spent with her husband and eleven-year-old daughter, Maria Khorsand focuses on quality rather than quantity.

"I have chosen the role of manager," she says. "So I do not intend to act as if I had a guilty conscience – that's merely destructive. I place a very high value on the time I have with my husband and my daughter."

Although Maria Khorsand lives mostly in the present,

What it takes to reach the top

Effective management is based on expertise. As a result, those who want to assume major responsibility within Ericsson must take a number of training programs. The most important ones are described here.

To be enrolled in the management training program, a candidate must have – first and foremost – a thorough basic education, with an emphasis on, for example, technology, economics or marketing. A person who begins to work at Ericsson and who is named a manager after a couple of years has to take a basic management-training course and obtain a so-called "manager's certificate". The training program is known as the "Leadership Core Curriculum" and it is conducted at Ericsson University throughout the world.

After several years producing favourable results as a manager, an employee can move on to a test unit known as the "Ericsson Assessment Center." As the name suggests, this involves many forms of testing. Here, the employee is able to learn, among other things, whether she or he has the "right" personal characteristics and attributes to handle one of the top positions in the Company.

Those who pass through this program successfully are given an opportunity to broaden their management perspective in the "Global Perspectives" training course. The objective of this program is to broaden the employee's knowledge and understanding of Ericsson's strategies, ambitions, history, culture and global operations, all from a management perspective.

A year of work outside the employee's home country, as well as experience in both the production and marketing units? is required in order to reach one of the highest positions. After a couple more years in managerial positions, a number of persons are offered an opportunity to take "The Ericsson Executive" course that is conducted at the Columbia University School of Business in New York. The emphasis here is on strategic issues; the participants learn to develop a strategy, are trained to implement it and to develop their individual managerial skills.

The employee who has emerged successfully from these training programs and who has acquired broad experience as a manager is well qualified to assume one of the top management positions in the company.

ULRIKA NYBÄCK

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ILLUSTRATION: BJÖRN HÄGLUND

MARIA KHORSAND

1957	Born in Iran	1997	Ericsson Management Planning course
1975	Moved to Los Angeles	1999	The Ericsson Executive program
1987	Moved to Sweden and began working at Ericsson	2001	President, Ericsson Technology Licensing (February)
1994	Management development training		

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One side of the new banknotes will be the same in all EMU countries, while the other can vary from country to country," says Nina Macpherson, who is company coordinator for Ericsson's EMU activities.

PHOTO: PRESSENS BILD

Advent for the euro

Farewell D-mark, pesetas and guilders – after New Year, the euro will be the valid currency in all EMU countries. It has existed for nearly three years as an electronic currency and now it is time to become accustomed to the coins and notes. At Ericsson, efforts to prepare for the introduction of the new currency have been under way since 1996.

It began with a note on a desk: "EMU. Can you take care of it?"

"Nobody really knew anything," recalls Nina Macpherson, who now coordinates the company's EMU activities. "So we quite simply read up on the subject. We went to seminars and courses until we felt that there was nobody who could teach us any more. Then we decided to start a pilot project."



Nina Macpherson

Ericsson Netherlands was chosen to lead the way. Already at the end of 1997, work began there to prepare for the transition to accounting in euros. A great deal of effort was required: computer systems were adapted or replaced, price-lists were rewritten, forms referring to the guilder disappeared, customers and suppliers were contacted regarding the possibility of billing in euros.

"Nevertheless, the largest change was adopting a new way of thinking," recalls Siska Meerkerk, who

managed the euro project in the Netherlands. "It took time to become accustomed and, initially, there was occasional confusion, usually relating to the question of whether a sum was given in euros or guilders. However, we had no really major problems."

The other EMU countries have subsequently had excellent opportunities to learn from the Dutch experience. The local companies were able to choose when they wanted to switch to accounting in euros. Just before the old currencies disappear at New Year, the last companies – Austria and Greece – will make the change.

"For us in the Netherlands, there will be no major difference in the way we work," says Siska Meerkerk. "On the other hand, it will be noticeable on a personal level. We will be paid in euros and will have to become accustomed to only having euro prices in shops."

Nina Macpherson finds it positive that the company started to prepare in good time.

"We really want to be at the forefront in all areas," she says. "Being able to issue and receive invoices in euros at an early stage is a service for our customers and suppliers. Ericsson has taken a clear stance in favor of EMU."

"We regard the goals of monetary union, such as a stable interest rate and healthy government finances, as conducive to creating a positive climate in which companies can operate," says Nina Macpherson.

The euro will also generate some rationalization gains, such as the possibility of establishing a joint cash pool for all EMU countries.

During the first two months of the New Year, the old currencies will exist in parallel with the euro. After this period, it will become more difficult to exchange the old money. It is therefore time for employees outside the EMU to also exchange any money left over from earlier trips.

The Swedish view of EMU has become increasingly positive recently. This is also one of the reasons that Nina Macpherson and her colleagues are now planning a substantial analysis of the consequences for Ericsson of Swedish membership of the EMU, compared with non-membership.

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hello there...



PHOTO: JESPER MOTT

Anders Friman, who became project manager for the WCDMA Total Project R1/R2 on October 1. The project involves Ericsson's first deliveries of 3G systems, which are currently underway. Previously, he worked at Ericsson Business Innovation, where he was operations manager and senior vice president.

Can you provide a brief outline of the WCDMA Total Project?

"In this project, we are working with two initial customers, J-Phone in Japan, which is to launch its network on June 30, 2002, and Vodafone in the UK, which will launch its network on October 1, 2002. The project comprises primarily core and radio networks, although we also assume responsibility for the system in its entirety, including mobile phones, applications, service networks and services. We have more or less completed the design process and are currently in a hectic verification stage. Both Ericsson and its customers have made large-scale investments in 3G. We must deliver the systems on time in order to rapidly begin to recoup our investment. The project is extremely important for Ericsson's future. If we miss out on 3G, we will lose our position as a world-leading supplier of systems."

How many employees are involved in the project and how many sub-projects does it consist of?

"I have no exact figure, but there are about 7,000 to 10,000 people involved in research and development. We have 11 sub-projects."

What do you do to maintain an overview of such an immense project?

"You have to work with a total overview and try to identify aspects we might have missed. You have to concentrate on details that are decisive for customers and the sorts of things that might cause delays. The details are followed up in the sub-projects and close cooperation within the project group means that we are able to maintain control."

What is the greatest challenge for you personally?

"Being able to get everyone to focus on a few important targets and getting them to feel that they are part of the process that will lead to our ultimate goal. Many have worked on the project for more than three years and now we must keep the adrenalin flowing."

What will be the most important thing to happen next?

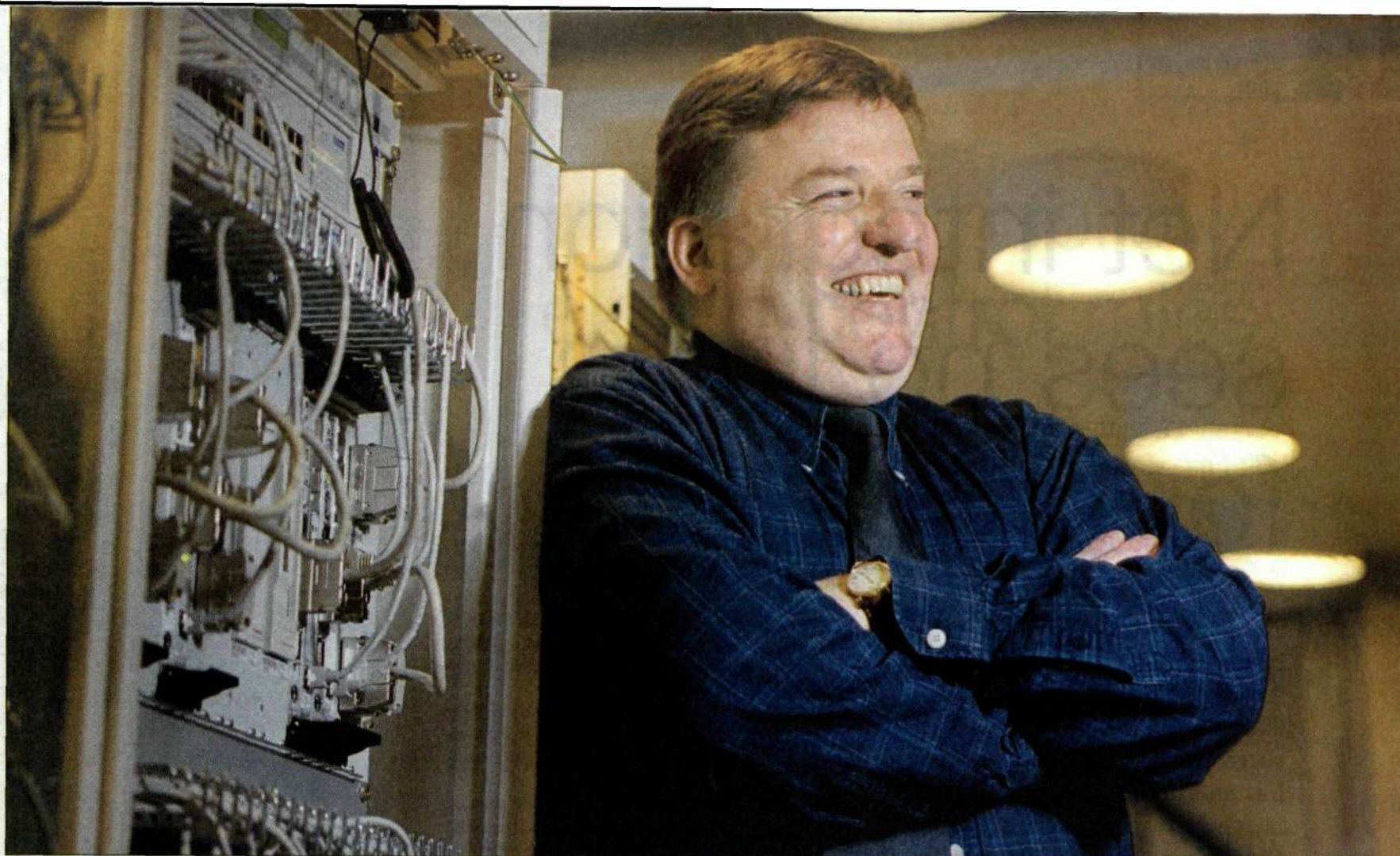
"Without a doubt, it will be the delivery of software to Japan during February 2002. This forms the foundation of our being able to roll out the system, in collaboration with the customer, in time for the launch on June 30."

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MEMBERS OF EMU

- Austria
- Belgium
- Finland
- France
- Germany
- Greece
- Ireland
- Italy
- Luxembourg
- the Netherlands
- Portugal
- Spain



Anders Wänman, who is responsible for the core unit Core Network Development, will be implementing extensive changes next year. Operations are to be made more efficient, concentrated to fewer locations and fewer products will be developed. Despite these far-reaching adjustments, he views the future with confidence. "I'm certain that things will go well, we have a highly competent workforce and world-leading products," he says.

PHOTO: GUNNAR ASK

More efficient core

At the beginning of December the US operator Cingular was the first in the world to install Ericsson's new switching platform, the AXE 810. The core unit, Core Network Development, produces some of Ericsson's best selling products. Now its operations are under review. The unit is to be made more efficient, its operations will be concentrated to fewer locations and fewer products will be developed.

There are those who believe that the AXE switching platform will soon have outplayed its role with the increasing importance of IP technology in the telecom industry. Anders Wänman, who is responsible for the Core Network Development unit, does not agree. He tells us about the latest contract with US operator Cingular, which started using the AXE 810 switching platform in its network at the beginning of December.

"The AXE 810 is incredibly powerful. Compared to its predecessor, its processors are twice as powerful; it uses less current and can handle twice as much data and voice traffic. Development and production costs are also lower," explains Anders Wänman with a satisfied expression.

The Core Network Development unit is responsible for developing and refining products for the backbone network, otherwise known as the "core network". The backbone consists of servers and applications that route the traffic in the network. The unit also develops

the AXE, CPP and TSP&WPP switching platforms (see vocabulary list below).

Despite successful sales, a difficult year, with extensive changes within the unit, awaits.

By now, most people are aware that research and development costs within Ericsson must be reduced substantially. To date, the core unit has met set savings targets by substantially reducing costs for consultants, IS/IT and administration.

Central responsibility

Savings and efficiency measures within the unit will continue during 2002 with the central responsibility for the operation being gathered in three countries: Sweden, Germany and Italy. This forms part of the "concentration strategy." Development operations will continue in several countries, although primary responsibility will be concentrated to the three countries named above. Currently, 7,000 people work for the core unit in 15 different countries.

A further component in the process of increasing efficiency is a review of the product portfolio. This means that Ericsson will offer only three main platforms in the future: AXE, CPP and TSP&WPP.

"Offering three platforms instead of all of those currently included in our range could be compared with creating a universal language. Ericsson will be per-

ceived as clearer and more efficient. I am convinced that customers' confidence in us will increase," says Anders Wänman.

Visions to be realized

He views the future with optimism and believes that the changes that are to increase the efficiency of the unit will work well.

"Some parts of this revision will be tough but I am convinced that everything will go well. Our staff are highly competent and our products are world-leaders," he says.

The largest challenge for the core unit during 2002 will be to ensure that shipment and installation of version 2.0 of the backbone will be provided to customers on time.

"We find ourselves in a period where we must ensure that the 3G networks are built out, put online and truly begin to be used by end-customers. Now it is a matter of realizing our visions before we invest all our energy in the next vision: the fourth generation of voice and data networks.

ULRIKA NYBÄCK

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ERICSSON CORE NETWORK DEVELOPMENT

Some concepts:

AXE 810: a switching platform for circuit and packet switched systems

CPP (Cello Packet Platform): a platform for ATM and IP communication

TSP&WPP (Wireless Packet Platform): server platforms for services and network control

Core unit for Core Network Development: delivers backbone networks and nodes to the Multi-Service Networks, WCDMA & GSM and CDMA Mobile Systems business units. Platforms are delivered both for nodes developed in-house and at the Radio Network Development and Service Network & Applications core units.

Net integration sees no limits for growth

The newly formed Systems Integration unit in Gothenburg is in the initial phase of an operation that has the makings of a major success for Ericsson. The company has an extensive range of network integration solutions for both fixed and mobile networks. The key now is to prove to the operators that Ericsson is the best choice of supplier in the market.

As operators install an ever-increasing number of GPRS and 3G networks, they experience a growing need for help in integrating into their networks all the services made possible by the Mobile Internet. This opens up an entire new market to telecom suppliers such as Ericsson. There are no doubts within the company about the business potential of systems integration, and the personnel in the Global Services business unit are busy looking for the best ways to meet the operators' needs.

"If we manage to identify operators' individual needs - in terms of integrating billing and payment systems, for example - I can see no limit at present to how large this could be for Ericsson," says Bert Nordberg, head of Global Services.

Unit faces challenge

On September 1 this year, a special unit, Systems Integration, was established within Ericsson with the task, in plain English, of turning systems integration into a success for Ericsson.

"While this is a major challenge, we are very well equipped to succeed," says Mikael Bäckström, head of Systems Integration. "Ericsson has all the necessary technical knowledge and experience. Our task is to demonstrate to customers that we possess the know-how they require."

The company's aim is not merely to earn money by integrating mobile services on behalf of operators. The business concept also offers customers a complete package of services including business consulting.

"We have received clear indications from the network operators that this is something they are interested in," continues Mikael Bäckström. "Increasingly, the

operators concentrate on looking after their subscribers and hand over responsibility for the infrastructure to someone with greater expertise in that area."

He believes that in the shorter term Systems Integration could make a major impact in applications relating to billing and service assurance (quality assurance of services).

"In the billing and prepaid areas, we are working hard to find individual customer solutions. The trend we have noted is that an increasing number of mobile phone subscribers choose to prepay their charges, and the operators want an effective system that lets them see exactly which services the end customer is using," explains Mikael. "We also anticipate a strong demand for service assurance systems in the future. We can offer systems that guarantee that a service ordered by a customer actually reaches the customer, even if telephone traffic is unexpectedly interrupted while the order is being placed."

New sales method

Systems Integration conducts all of its sales activities via the market units. Mikael Bäckström notes that a transaction within Systems Integration involves a totally new approach to selling within Ericsson:

"Instead of showing the customer a finished product and saying 'This is what you need,' we will determine jointly with the customer what the customer requires help with and then develop the best possible solution. Our task at head office is to assist the sales staff in the market units with all the sales support and technical expertise needed to meet the operators' wishes. But we also function as an evaluation center. All the mistakes and advances made during a sales project are documented in detail and evaluated here in Gothenburg. In this way, we can learn from our mistakes and constantly improve."

According to Daren Mancini, head of the Mobility Solutions department within Systems Integration, Ericsson's systems integration sales have begun to gather momentum in Mexico, Brazil, Italy and Germany.

Mikael Bäckström is confident about the future: "I believe the pace will really pick up during 2002, when we expect to do more business in China and the US. While it's true that business has been good this year, we are hoping to double sales in 2002."

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Many people within Ericsson are pinning their hopes on the new Systems Integration unit in Gothenburg. Mikael Bäckström, right, head of Systems Integration, and Daren Mancini, head of the Mobility Solutions subunit, view the future with optimism.

PHOTO: ANDERS ANDARVE

Reliability

Canadian mobile operator, Rogers AT&T Wireless, recently chose the Billing Mediation solution from Systems Integration in conjunction with the launch of GSM/GPRS services in its TDMA network.

Rogers AT&T Wireless is Canada's largest mobile operator, with 2.5 million subscribers in its nationwide mobile network. When the company recently decided to integrate its existing TDMA network with voice and data services via GSM and GPRS, it was looking for a simple and cost-efficient network solution to handle billing and call charges. The final choice was Ericsson's Billing Mediation solution, one of the products in Systems Integration's product portfolio.

"There were two main reasons for choosing Ericsson," says Bob Berner, technical manager at Rogers AT&T Wireless. "Firstly, we have been cooperating with Ericsson for many years and know that they always deliver on time and at the agreed price. Secondly, Ericsson has a sound and honest system for estimating product life cycles and assuming responsibility for its products."

The task of integrating Billing Mediation with the

decisive

customer's network involved close cooperation based on the mutual respect between Global Services' sales staff in Montreal and Rogers AT&T Wireless.

"I must say that Global Services' organization has proved to be a major asset for us. I am certain that we achieved a better result by dividing up the work than would have been possible if we had worked entirely separately," concludes Bob Berner.

JENZ NILSSON

BILLING MEDIATION

Billing mediation is a billing system that obviates the need for operators to create a unique customer solution for every new network element added to the network. The system sorts data according to various standards and protocols (prepaid, postpaid, etc.) and distributes it in the form of, for example, an interconnect system or a fraud-prevention solution.

Important to follow export control rules

The terror attacks against the US on September 11 have led to a tightening of the rules for export controls, and the US Congress is currently in the process of approving the Export Administration Act of 2001, notes Alan Jansen, who is in charge of export control issues in the Global Services business area.

The purpose of export controls is to prevent certain military products - or non-military products with a potential military application - from being made available to the wrong users. The controls had their origins in the Cold War face-off between East and West. Today, activities in this area are conducted by the US and the EU and are more strongly focused on terrorism than before.

In this context, "product" refers not only to hardware and software but also to technical know-how. This means that the increase in e-trading and information transfer via the Internet is a key issue. An important definition is that products are considered American if they have more than 25-percent American content (or 10 percent for countries covered by US embargoes). Since Ericsson is dependent on high-tech components from the US, it must follow the rules scrupulously.

Forbidden partners

Global Services, which handles equipment service and repair on a global basis, realized the importance of enhancing its knowledge in this area. Accordingly, at the beginning of December, Alan Jansen arranged a seminar to which he invited American and European experts in the field.

"Ericsson is required to have export licenses before it can be allowed to export so-called dual-use products - products that have both a civilian and a military application," explains Alan Jansen. "Given that Global Services has many cooperation agreements with companies throughout the world, it is particularly important that we keep a close check on these partner companies."

There is in fact a list of blacklisted companies and individuals. This list has grown rapidly since September 11 and now extends to more than 60 pages. At a seminar in London in November, the US delegation announced that 63 new individuals/companies were to be included in the list. It would have serious consequences for Ericsson if

the company were to conduct business with anyone on the list. Third-party companies must in turn guarantee that they keep a close check on their suppliers.

Checks precede delivery

"It is essential to check names - especially prior to every delivery," says Per Samuelsson, head of Distribution Logistics, which also covers export controls. "Nowadays, the tolerance for mistakes is essentially zero."

Per Samuelsson sees these changes, which now also apply to export controls, as part of a larger context as far as Ericsson is concerned.

"We attach growing importance to customs issues and export controls now that our delivery flows are becoming increasingly global. It is essential to resolve export issues at an early stage of the process; otherwise we risk losing our delivery momentum, which we cannot afford to do."

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PHOTO: ECKE KÜLLER

Export licenses are required before Ericsson is allowed to export technical equipment that could also have a military application, explains Alan Jansen, holding up a license which for security reasons cannot be shown here.

SYSTEMS INTEGRATION

Systems Integration, which was formed in September 2001 as part of the Global Services business unit, has a total of 130 employees. The head office is in Gothenburg. Systems Integration was previously part of the Telecom Management & Professional Services unit within Global Services. Systems Integra-

tion comprises the Customer Management, Network Management and Mobility Solutions sub-units and offers operators a consulting service and integration of complete system solutions for billing and payment services, among other applications, via the telephone network.

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Double strength GSM base station

The new RBS 2206 GSM base station that is now being rolled out in North America is a powerful package. It has double the capacity of the current best-seller, the RBS 2202, and has other features that make it unique in the marketplace.

"North America likes the RBS 2206," says Ulf Wahlberg, manager for GSM base station development. "New operators, in particular, like our solution with double transceivers in a single unit. Coverage can be provided quickly by doubling the output power. Then, when the network is built out, the software can be reconfigured to reduce power to the normal while allowing the operator to double the number of channels."

The RBS 2206 is an indoor macro base station for GSM. The outdoor model, with bullet-proof casing, is the RBS 2106. This is Ericsson's third GSM platform. It has three times the capacity per unit of floor space as the first-generation 200-series and twice the capacity of the 2000-series introduced in the mid-1990s.

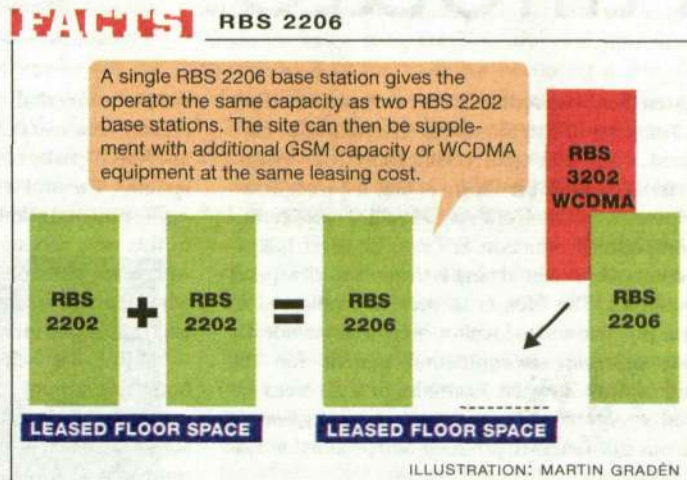
The designers succeeded in putting two transceivers (transmitter/receiver) in a single dTRU (double Transmitter-Receiver Unit) in the station. This is one of several technical innovations that make the RBS 2206 unique in the marketplace. The result is that an operator can replace two 2202 base stations with one 2206. The vacant space at the site can then be used for a new 2206 cabinet to handle the increasing traffic or a third-generation WCDMA cabinet. The RBS 2206 is therefore a cornerstone for the transition to 3G. It also supports Edge, which enhances GSM data rates on existing frequency bands.

Easily adapted to different systems

Ericsson has been working on its third-generation base stations for several years.

"Major technology shifts are difficult," says Mikael Wahlén, project manager. "We have built an entirely new hardware and software platform, but all the indications are that we have been thinking along the right lines and that we have a modular product that can be easily adapted to various systems."

The starting point was the price war in the GSM market that demanded more compact base stations with lower manufacturing costs. The new RBS 2206 is a more efficient product than the 2202, which it is now planned to replace. Product manager Johan



Andersson points out several examples of the new base station's excellence.

The new double-transceiver design means that a single command from the Base Station Controller (BSC) is sufficient to make both TRX:s operate in tandem, thus increasing output power. This is a solution that is unique to Ericsson. A cabinet with up to twelve transceivers can be configured in several different ways, in one, two or three sectors. The RBS 2206 can be co-sited with RBS 2202 or WCDMA base stations. The RX signal for GSM can also be shared with TDMA systems, thus solving many of the TDMA operators' problems. Another practical feature is that screw contacts have been replaced by punch-down contacts, thus halving assembly time and reducing the risk of faults. All cables and cooling vents have been brought out to the front panel so that floor space can be used more efficiently by placing cabinets against a wall or against each other.

Roll-out in North America

Originally, the intention was to design new base stations primarily for use in Europe and Asia on the 900 and 1800 MHz frequencies. In time, it proved that GSM 1900 in the US and Canada had the greatest need, due to the major expansion of GSM and EDGE in these countries.

Tord Klintebäck, who is responsible for the North American roll-out, relates that Ericsson currently has two commercial contracts. One is with AWS in Dallas, where the entire area is to be covered exclusively by RBS 2206 stations – about 500 in total. The other contract is with Rogers AT&T in Canada, which will cover rural areas using approximately 700 stations, all of which will be in operation before Christmas. The RBS 2206 and the outdoor version, the 2106, are also included in the recently signed contract with Cingular.

"We delivered 1,200 base stations in just nine weeks, and installation of all cabinets will be completed by Christmas," says Tord Klintebäck, adding that many cabinets are only being half-filled initially, meaning that there is a significant potential for add-on orders.

The RBS 2206 was originally intended to support the existing GSM frequencies of 900, 1800 and 1900 MHz, but 800 MHz will also be supported.

"We have prioritized the North American market, thus securing a significantly higher market share for GSM in the US," concludes Ulf Wahlberg.

Vodafone approves WCDMA equipment

"I have had a dream about 3G – and now it is reality," says Paul Edwards, Assistant Chief Engineer at Vodafone in the UK, who has just joined two of his colleagues in announcing that they are extremely pleased with Ericsson's WCDMA products and are recommending that Vodafone's management approve the Factory Acceptance Test (FAT).



Visit to the Gävle plant.

PHOTO: J-BILD

On November 28–29, Vodafone's representatives visited Ericsson in Gävle and Nynäshamn, in Sweden, to conduct a process audit and FAT for radio base stations and the Antenna System Controller.

"We can see that you are fully prepared for volume deliveries," says Paul Edwards. "At Vodafone in the UK, we can now prepare for the next stage of our development, with the launch and expansion of our network."

"From the perspective of the WCDMA project, we consider today's event as a milestone that testifies to the high quality of our products," says Johan Frisk, Ericsson's customer project manager for Vodafone UK.

"Thousands of people in various subprojects have been working for years to develop the radio network for 3G."

Competition makes switches sleeker

Does the appearance of telecom equipment make a difference? You wouldn't think so, since it is mostly placed out of sight and seen only by the operator's technicians.



Ericsson's new AXD 305 ATM switch, however, which is a trimmed-down

AXD 305 – a perfect combination of design and technology.

version of the successful AXD 301, owes its appearance to industrial designer Martin Sallander of T Design, who created a front panel that is not only beautiful, but also integrated functionally with the equipment inside by forming part of the cooling system.

This is the result of increased competition due to deregulation. When equipment from different suppliers is placed side-by-side on the operator's premises, it is often only the appearance that sets the boxes apart. Appearance is also important at exhibitions and in catalogues.

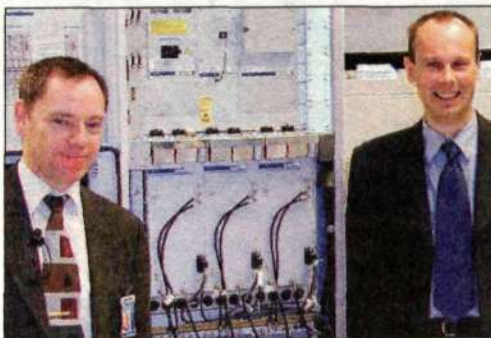
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Base stations tested to withstand earthquakes

It is not a coincidence that Ericsson's mobile networks, including switches and radio base stations, normally withstand even the most severe earthquakes, such as that which hit Kobe, Japan, and measured 7.2 on the Richter scale.

Although Ericsson's old test facility was sold in 1996 and has been operated since March 2001 by the US-owned company Sanmina Developments AB, new product designs are still subjected to demanding impact and vibration testing at the facility. In-service performance is measured during violent shaking and vibration to ensure that the equipment will withstand both transports and earthquakes. Earthquake vibrations are realistically simulated using actual measurements. The new RBS 2206 GSM base stations, for example, were tested here.

www.sanmina.com



Mikael Wahlén and Johan Andersson admire the new GSM base station that will pave the way for 3G and WCDMA.

PHOTO: MATHIEU LEGARS

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Ericsson first to obtain global certificate

Ericsson is the first company in the world to obtain a global ISO 14001 certificate from the BSI (British Standards Institute). This means that all Ericsson plants and offices now have a common environmental management system in place.

This environmental certification covers all of Ericsson's operations, spread throughout three continents. This includes everything from production, design, purchasing, sales, deliveries and customer support to administrative support functions.

"We are extremely pleased that we are also pioneers on the environmental front. Many of our customers require unequivocally that Ericsson have a system of environmental control," says Lars Göran Bernau, who bears the global responsibility for Ericsson's environmental efforts.



Lars Göran Bernau

Ericsson's environmental con-

trol system has been scrutinized by environmental auditors from the British Standards Institute, who have approved it for ISO 14001 certification. The unique characteristic of this certificate is that it covers Ericsson's operations in their entirety. Most ISO 14001 certificates only cover production. Ericsson, however, has extended its environmental targets to apply to all aspects of operations. The idea is to involve employees as much as possible and to focus on areas that provide the greatest possible environmental benefit for the amount of work invested. Examples of such areas are reduced energy consumption and the reduction of dangerous substances in products and production systems.

"We all want to contribute know-how and do our bit to help Ericsson play its part in the sustainable development of our society," says Lars Göran Bernau.

The environmental management system was introduced with the help of an Internet-based tool called Workbook, which acts as an important support in work

on environmental matters. Workbook describes in a practical manner how the system is to be implemented and how it can be integrated into existing management systems. The tool is used to gather information about environmental efforts in various parts of the company. In this way, various units are able to compare notes with one another, and positive examples are shared, while it also becomes easier to follow the progress of each individual unit.

"This system helps make our environmental efforts both easier, more cost efficient, less bureaucratic and more stimulating. It helps us to measure and understand our current position and where efforts are required. It also provides feedback on environmental work, so that we can ensure that the targets we have set are fulfilled," concludes Lars Göran Bernau.

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Energy consumption key to environmental work

Ericsson is not only a world-leader in its industry. The company is also a leader with respect to environmental work and is making efforts to reduce emissions and increase awareness. Michele Schmidt, manager for marketing and communication in environmental matters, describes some of the programs underlying the company's successful environmental work.

"We cannot continue consuming resources at the rate we are doing today," says Michele. "If the whole world were to reach the same level of consumption as the western countries, we would need ten planets."



Michele Schmidt

As the manager responsible for communications relating to Ericsson's environmental work, Michele Schmidt views information technology with considerable hope, since she sees this as the key to sustainable development. With the help of Information and Communications Technology (ICT), use of resources can be reduced, while living standards are maintained.

"We are working in an industry that allows more environmentally friendly choices. The development of teleconferencing systems, teleworking and information searches on the Internet can eliminate a lot of resource-consuming travel," says Michele Schmidt.

For a person working with environmental issues in a large company such as Ericsson, there are many things to keep track of. Everything from product manufacturing to corporate culture must be taken into account. To get everyone to work towards the same goals, there is a

global environmental management system that provides guidance and support for environmental work throughout the organization. The system consists of guidelines and targets that must be implemented by environmental managers within each individual unit.

"The environmental management system is a means for us to monitor environmental impact and to see how energy consumption can be reduced. It also helps us to ensure that all Ericsson companies and employees are working with the right things," explains Michele Schmidt.

When energy is consumed, carbon dioxide is released into the atmosphere, thus contributing to the greenhouse effect. A fundamental principle in Ericsson's environmental work is therefore saving energy, not just by designing products that consume less power, but also by increasing the efficiency of production, handling and administration processes.

"We calculate how much energy a product uses during its entire life cycle, from design to scrapping. This allows us to take measures where they are needed," continues Michele Schmidt.

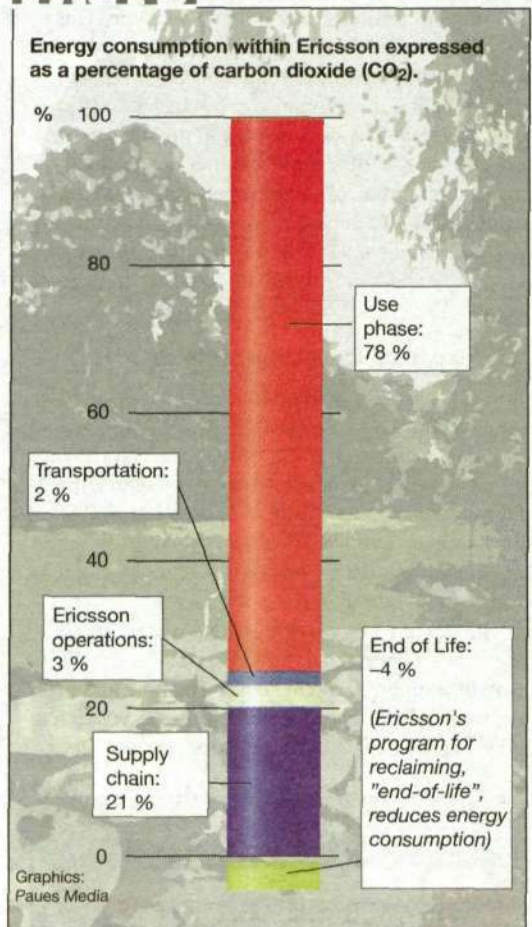
Another method of reducing energy consumption is to increase awareness among employees and encourage them to show consideration for the environment in their daily work. Ericsson's web-based environmental training programs in which employees can see in practical terms how their actions affect the environment have won praise from the Swedish Society for Nature Conservation.

The pressure on Ericsson to show greater consideration for the environment comes from many sources. Mutual funds with an ethical profile are increasingly popular, and shareholders and other investors want to know what Ericsson is doing for the environment. Major customers require all their suppliers to have functioning systems for monitoring environmental impact, and Ericsson makes similar demands on its suppliers.

More and more people are becoming involved in environmental work, and, particularly among employees, there is a great interest in ensuring that Ericsson's operations are as environmentally friendly as possible.

"No one likes working for a company that con-

ENERGY CONSUMPTION



tributes to pollution and wasting resources. We all feel much better if we know that we are among the world leaders in environmental work," concludes Michele Schmidt.

TONYA LILBURN

First prize for virtual soap opera

The interactive soap opera **Supafly** brought home the first Ericsson Mobile Application Award in Zurich, Switzerland. Behind the Application was the Swedish company It's Alive Mobile Games AB.

Supafly is a new type of game that drapes an adventure over the real world and let users interact in a virtual soap opera that forms a part of their everyday life. Players style their role-play characters



Patrick Hansen of m-plify, winner of People's Choice Award, Lars Ericsson of It's Alive, winner of Best Mobile Application Award (main award) and Fabio Cesa of Silentoil, winner of First Tuesday Innovation Award.

PHOTO: PATRICK GUTENBERG

on the game website and then enter into the soap where intrigues, gang conflicts, flirt and romance are the tools of the trade for becoming a virtual celebrity. The game is a combination of multiplayer role-play game, buddy list, community and dating application, aimed at an age segment of 16-28.

The game was one of ten contestants at the awards ceremony in Zurich, that were selected out of more than 80 applicants from throughout Europe. The event was attended by more than 400 people and held in conjunction with First Tuesday Zurich and media partner Cash.

"The contest is a very good initiative by Ericsson, it helps stimulate the industry and the victory will also be a great help for It's Alive in the marketing of this game," says Sven Hålling, CEO of It's Alive.

Supafly was not only voted to be the Best Mobile Application, it also scored the highest points in the other two Awards, the First Tuesday Innovation Award and the People's Choice Award. As a contestant could only win one award, the runner-up in the respective criteria was selected as the winner: The Luxembourg based company m-plify SA won the People's Choice Award for its mobile pill reminder service. Silentoil SA from Lausanne Switzerland won the First Tuesday Innovation Award for machine-to-machine oil tank information exchange.

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Londoners find their way with Damovo

Travellers on the London Underground can now enjoy better service when making traveling enquiries. A new installation, located in the St James' Park customer services centre, brings together 40 agents, who were previously based in four separate locations and contactable via ten different numbers. The system provides a single point of response to all travel enquiries, and has been introduced by the communications solutions provider Damovo. Passengers can also make enquiries via e-mail from the www.tube.com website.

Ericsson owns 20 percent of Damovo, which was launched earlier this year following the sale of Ericsson Enterprise sales and services operations to Apax Partners.

Mobile talk is monkey business

The Social Issues Research Centre (SIRC) has found that mobile phones help bring out the ape in us by allowing complete freedom to gossip when we want. Swapping tidbits of information about friends, work colleagues and family is the equivalent of social grooming among our primitive cousins, according to anthropologists.



Likes gossip.

The result of the report is that mobile phones have increased and enhanced this vital therapeutic activity, as it allows us to gossip any time, any place, and anywhere.

Radio cure for homesick expatriots

Are you a swede working abroad? Are you longing to listen to your mother tongue? Then you might want to tune in to Radio Sweden. The program is broadcasted daily on all continents and gives you the latest update on swedish news, sports, politics and much more – in Swedish.

Find out more on:

www.radiosweden.nu

new assignments

Ulf Sjöström has been appointed Expert in the field of ASIC technologies.

from the archives

Fifty years ago Anna Lundström, the first lacquer woman in Scandinavia, received a gold medal from Ericsson for long and faithful service. Anna Lundström, who's job had been to give telephone parts the finishing coat of lacquer since 1907, had a positive view of the future. "I have daily evidence that the future looks bright. In former times everything got a black coating, but nowadays white is the color we use the most," she said to *Contact*.



contact

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"The best part of my job is meeting the children," says Santa, who receives thousands of letters every day from children all over the world.

PHOTO: TOMMY LAPPALAINEN/JOULUPUKKI TV

Santa – wireless but not clueless

Tradition is important to Santa Claus. But in a job that involves a lot of paperwork and traveling, modern technology can be a big help. *Contact* paid a visit to Santa Claus, to find out how he manages during the busy Christmas season.

It is a dark December morning in the northern Finnish town of Rovaniemi, the hometown of Santa Claus. An enormous Christmas tree lights up the central square of Santa Village, where children are playing in the snow around a big ice-slide. Christmas carols can be heard from loudspeakers overhead. Santa Claus himself is in his office, working. This close to Christmas, things are very busy, but up until now everything is running according to schedule.

"Christmas comes at the same time every year, so it's just a matter of good planning really. The elves and I, we're managing fine," says Santa Claus and chuckles behind his long curly beard.

Occasionally, children come in to Santa's office to present him with a drawing or a wishing list. A little boy with blonde curls stands awestricken in the doorway, clutching a crumpled piece of paper. Eventually he plucks up the courage to approach the big desk where he hands over a drawing to Santa.

Even if Santa Claus believes in sticking to tradi-

tion, he is not loath to using modern technology. Traveling is a big part of Santa's job, and a mobile phone helps him to be reachable when on the move. He also finds it very useful to be able to receive messages on his phone and see who has called. One service that Santa would like to see on the mobile phone in the future is reliable weather reporting.

"When you are up in the air with a team of reindeer it is important to be prepared for all kinds of weather."

Yet another group of children approach Santa's desk and a bunch of colorful drawings change hands. Santa is delighted and after a loud and boisterous conversation in Finnish the children run off to continue their games.

"Another thing that I'd like is for the children to be able to send me their drawings and pictures over the phone. That would be nice," says Santa with a glance at the growing piles of paper on his desk.

A great part of Santa Claus' job is to go through all the letters with drawings and wishing lists that come pouring in this time of year. Not counting those that are delivered in person, around 32,000 letters addressed to Santa Claus arrive every day during the Christmas season. To handle all this mail, Santa has opened his very own post office in the middle of Santa Village in Rovaniemi. Children in Japan, Great Britain and Poland are the most diligent letter writers.

"Sometimes I get wishing lists over my mobile phone as well, as SMS messages. I think that's very handy. And it keeps the lists nice and short!" says Santa Claus with a loud laugh that sets both belly and beard in motion.

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column

LARS-GÖRAN HEDIN
corporate editor

New offices explain bonus

The other day when we were cleaning out the photo archives here at the editorial offices, I found some pictures from the mid-1990s. In one of them, 27 of Ericsson's most senior executives were gathered for a group photo. At that time, this was called the 30-group or the Ericsson Executive Team, which Lars Ramquist summoned to meetings several times a year. When the photo was taken, all were present except three.

I then began to count how many of the 27 are still with the company. The result was surprising. As of January 1, 2002, only four of the 27 will remain with Ericsson – Kurt Hellström, Britt Reigo, Ragnar Bäck and Gerhard Weise. The other 23 have left active service with the company (including Lars Ramquist, who is certainly active as chairman of the board but has announced his departure from this post).

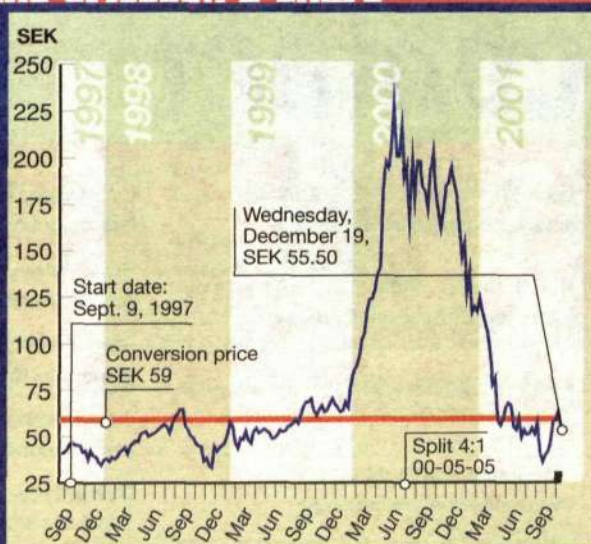
Talk about renewal! While there are certainly many of the leaders from that time who have retired, there are also several who were recruited by other companies – in some cases even competitors to Ericsson.

With these thoughts in mind, I can only feel amazement over the current debate in the Swedish press about Ericsson's bonus system. Is it so difficult to understand that substantial incentives are required to retain key persons in a company that has earned a reputation as the country's most exclusive training ground for managers and that competes with its rivals all over the world for top talent?

In these times of efficiency programs and cutbacks, it is important not to neglect all those continuing to work within the company. It is therefore a welcome Christmas present for the employees that the time has come to carry out Ericsson's Stock Purchase Program. This is a generous offer from the company to those who want to invest in Ericsson and become part-owners of the company. A much appreciated Christmas present, it can be said.

Merry Christmas and a Happy New Year to all of you from all of us on the *Contact* editorial staff.

The ericsson b share



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