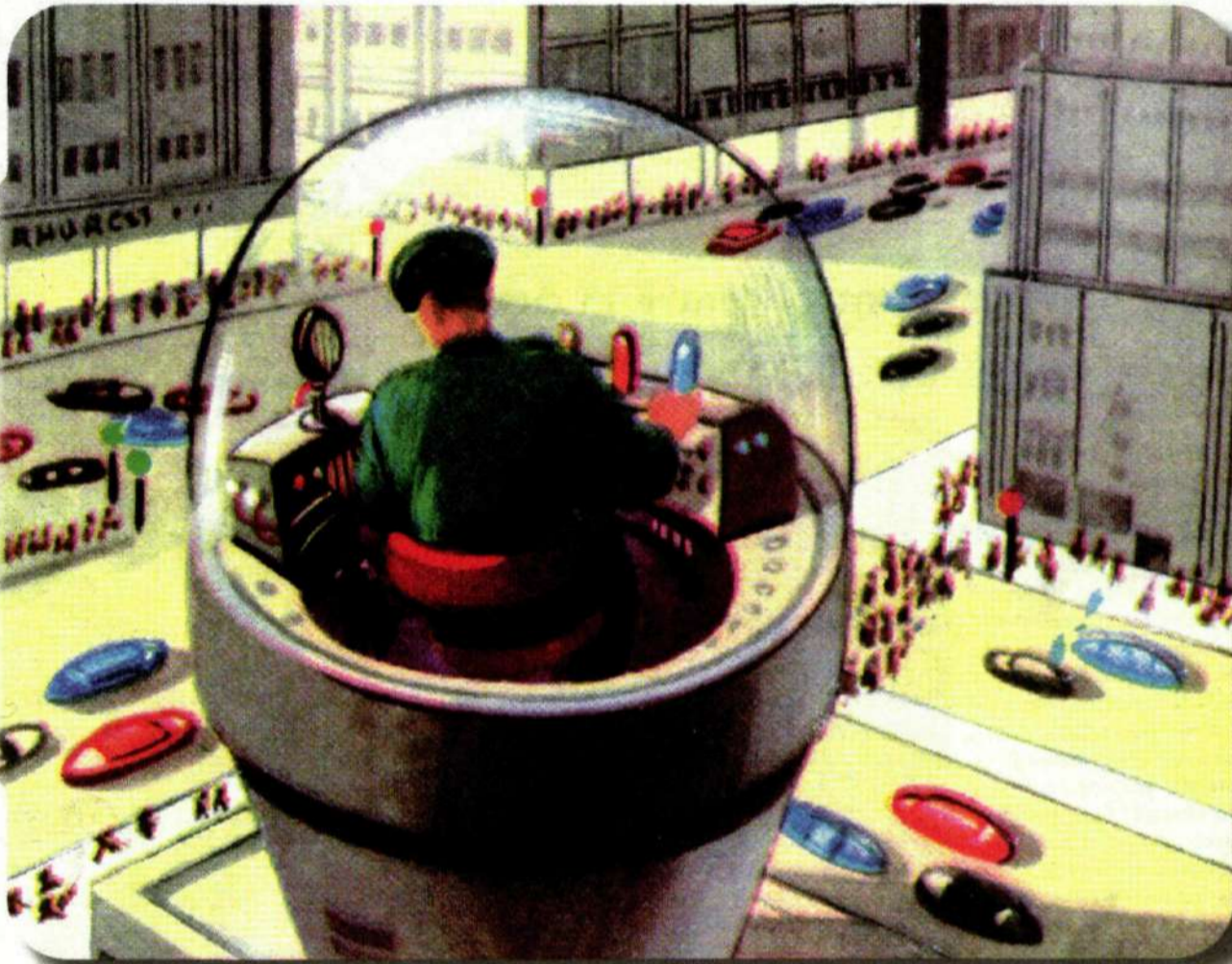




Traffic control centre in city



Traffic control center in city. The futuristic utopia dreamed of in the 1950s becomes reality. Ericsson is launching the e-box, which makes it easy to keep track of all telephone and computer traffic to the household.

New technology monitors the home via Internet

Ericsson is now launching the telephone jack of today, the e-box. All intelligent equipment in the home can be activated and monitored via the Internet.

The e-box will be the link between the local home network and a larger computer network. It will provide totally new possibilities for electronic services in the household. **10-11**



To come home after years abroad

Working abroad makes a lasting impression. Two years ago, Orvar Hurtig took his family to Ericsson in Dallas. All of them enjoyed life there. Returning home was the hardest part for the family.

Ingrid Anderzén has done research

concerning working abroad and has monitored many families from Ericsson. Her conclusions are that home organizations should take more responsibility for employees during their work tour abroad.

20-21

NEWS

Employees march for jobs

Around 1,500 residents of Norrköping in Sweden participated in a union organized march to protest Ericsson's decision to close the Ingelsta plant. Employees and sympathizers also protested in Skellefteå in northern Sweden against Ericsson's decision to cut 130 jobs in town. **3**

Rapid network construction

Ericsson replaced the existing telephone network after the flooding in Wuhan province, China, in only 80 days.

"It was important to show that Ericsson was there to support the region," said Zou Rensheng, manager of Ericsson's Wuhan office. **7**

Last stop for mobile telephones

Contact visited Nässjö in southern Sweden, where old mobile telephones are scrapped and recycled. **13**

Taiwan: Asia's exception

While the Asian crisis hit the economy of Southeast Asia quite hard, Taiwan suffered only mild setbacks. Ericsson is in Taiwan and hopes for business in the wide-band and multimedia sectors. **15-17**

Manual for the new Ericsson

In order for Ericsson to be a leader in The New Telecoms World, an organizational stroke of genius is not enough. New behavior and attitudes are also required. Contact's special supplement gives examples of how the new Ericsson works.



NEW ASSIGNMENTS

This week, the New Assignments supplement contains 312 vacancies.

TIPS ABOUT OUTLOOK

Contact gives tips on how to read E-mail via the web. **27**

contact

The publication for Ericsson employees all over the world

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Uddenfeldt leads Ericsson into the world of IP

The development of technology within the new telecom world is proceeding rapidly. Very rapidly. Jan Uddenfeldt's task is to ensure that Ericsson is at the forefront of this development. "We are now on the threshold of an entirely new generation of products. The main focus is on wireless Internet and speech via IP," says Ericsson's new senior vice president of technology.

The telecommunications industry is changing rapidly as the boundary between wireless and wired telecommunication is erased. The driving force is the rapid development in IP.

"A great deal of our development work is focused on new IP products. Already this year, GPRS package-data technology, which is a wireless Internet application, will be unveiled. In the year 2001, we will introduce the third-generation mobile telecom systems, Edge and WDCMA," says Jan Uddenfeldt who, since last autumn, has assumed total responsibility for Ericsson's technical development.

"We are also working on products for speech via IP and producing routers for both speech and real-time traffic. Together with the solutions we already possess, this provides us with an extremely strong product portfolio."

To release resources for allocation to new products is one of the great challenges for the new technical organization.

"We must become more efficient and exploit synergies. This applies not least to the traditional exchange area where we need to rationalize the development work which is dispersed among too many units at present," Jan Uddenfeldt continues.

Coordination important

Uddenfeldt emphasizes that coordination within Ericsson's technical development is crucial if Ericsson is to remain competitive. This emphasis on integration sets the tone for the two newly formed units which are directly under Jan Uddenfeldt.

"Within Ericsson Research are combined all research units and laboratories. Their job of introducing new concepts and ideas is based on a time horizon of from two to five years. Simultaneously, we are establishing the Generic Technology unit to handle pre-development, which is necessary to enable us to



Jan Uddenfeldt, Ericsson's senior vice president of technology, leads Ericsson's technical development from Kista, Sweden. A number of new IP products for mobile and fixed communication are now being developed. By the year 2004, Ericsson estimates that the world will number some one billion Internet users.

Photo: Peter Gunnars

rapidly introduce new products," says Jan Uddenfeldt.

A number of other operations have been combined within the Ericsson-wide product units, so-called core product units.

One of these core units is working with exchanges for both mobile and fixed networks, and is located at Ericsson Utveckling AB. Another unit focuses on basic AXE applications and is controlled from Ericsson Eurolab Deutschland.

"Cooperation is also the watchword for other product units. Many work for several business units, designing solutions within circuit-connected technology or package data, for example. Since the product units have total responsibility

for their products, it is they who assign jobs to our design units," explains Jan Uddenfeldt.

The major decisions pertaining to Ericsson's technological development are reached within a newly created forum, the Ericsson Technology Board. Included in the group are many of the product unit managers. In addition to purely technical know-how, familiarity with market requirements and needs is highly important for the strategies being drafted.

New competitors

"For each new product generation there emerge new competitors. We must be in close contact with customers to know what they consider is important. To merely seek the technical aspects would be catastrophic," says Jan Uddenfeldt.

The motto is to make it simple for the user. Within the technical areas where Ericsson is lacking in know-how or the ability to compete, the company leans toward opens systems and partnerships

"For example, we have long been active in microelectronics and in development tools for software," Jan Uddenfeldt continues.

"The other model is when we offer our technology to other industries in order to accelerate the de-

velopment of an open standard. Together with competing companies, we have, for example, ensured the presence of Bluetooth technology in both mobile telephones and computers, and developed Edge technology that can offer high-speed data in the future GSM and TDMA networks.

According to Jan Uddenfeldt, the breakthrough for wireless Internet will occur in successive stages within three to five years. Ericsson's projections indicate that by the year 2004 there will be one billion mobile telephone subscribers and one billion fixed telecom lines worldwide.

At the same time, it is expected that some one billion people will be linked to Internet, many of them by wireless mode.

"The most exciting aspect about the years immediately ahead is that the combination of PC and mobile telephone will become so seamless that there will be no problems in having the equipment constantly connected, anywhere.

"The emphasis will be placed on promoting wireless Internet use – and this will present Ericsson with an opportunity of enormous proportions," Jan Uddenfeldt concludes.

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JAN UDDENFELDT

Currently: Ericsson's new senior vice president of technology.

Age: 48.

Family: Wife Sylvia and children Jeanette 13, and Joakim 10.

Career: Doctorate in Telecommunications Technology from the Royal Institute of Technology, Stockholm, in 1978. Then began in the research department at what was then Svenska Radio AB – now Ericsson Radio Systems. Became head of research there in 1985. Became Technical

Director at Ericsson Radio Systems in 1990. Received an honorary doctorate from Lund University in 1996. Was the recipient of the Eduard Rhein Foundation Technology Award, the German "Nobel Prize," for contributions to the development of GSM, in 1997. Was appointed Ericsson's director of technology in 1998.

Likes: People with focus on creating of the new products based on high competens.



Friday evening the 5th of February, 1,500 demonstrators protested against Ericsson's decision to close the Ingelsta plant in Norrköping, Sweden. From left, Vivanne Appelkvist, Gärd-Louise Åbom and Ingmarie Nilsson. Photo: Björn Larsson

Fighting for their plant

Friday evening the 5th of February, a group of 1,500 Ingelsta plant employees and sympathizers marched in protest against Ericsson's decision to cease production in Norrköping, Sweden. Employees demanded that Ericsson find something to replace manufacturing of AXE Classic, an older version of AXE, which is now being shut down.

A total of 11,000 Norrköping residents have signed protest petitions which they will be submitting to Ericsson's management. Representatives from all of the political parties in the municipality spoke at a rally held in front of the city hall. Ericsson's decision to close the Ingelsta plant means the loss of 600 manufacturing jobs in the community. Two years ago, when Ericsson ceased production in Norrköping of various items, including printed board assemblies, 1,700 people lost their jobs.

Currently, a number of Ericsson subcontractors are located in the area, and Ericsson Data has also set up operations there.

The Norrköping union locals want Ericsson to divulge the factual basis behind management's decision to close the Ingelsta plant.

"We fully believe that it is possible to bring in new products for production. That's why we need to see the basis for making this decision," says Norrköping union representative Britt-Louise Calderon.

Investigate the possibilities

When Sven-Christer Nilsson informed the Norrköping employees of the decision, he also said that management had left no stone unturned in its efforts to find alternatives to replace production of the older version of AXE with new manufacturing.

"The unions would like to turn over those stones which Sven-Christer Nilsson spoke of," says plant manager Per Samuelsson. "Of course we'll meet that demand. They have already received a great deal of information and they'll get more."

Negotiations with the union began the day after the announcement was made.

There are several reasons behind

Ericsson's decision not to continue operations once production of the older AXE Classic version of AXE cease. Advances in manufacturing mean that fewer people can produce more products. The products are becoming smaller and are faster to manufacture and install. Lead times—the time from the placement of an order until the product is delivered and installed—continue to shrink. Today, those times have been reduced to between four and five days on average.

As a result, it has become difficult to have part production, assembly, packaging and the testing of products at separate locations. The transportation of parts takes too much time and costs too much.

Temporary workers

"This means that it is no longer possible to fragment production. Now, manufacturing needs to be concentrated in a few locations," says Ulf Wettergren, personnel manager for Swedish plants in the Operators business segment.

"We know that there are a number of temporary workers at Ericsson's plants in Sweden. We are trying to

find out where those employees are and what they are doing. There are jobs to do and there are a number of new products which can be manufactured here," says Britt-Louise Calderon of the union.

There are over 1,000 employees who have been brought in from other companies to work at Ericsson's plants in Sweden. But even those jobs will be reduced in the future.

"We have notified the central union about these jobs. What is going to happen is that there will be a reduction of those jobs this year," says Ulf Wettergren.

On Friday, the union in Norrköping requested that a collective wage-earner consultant be called in to assist in reviewing the arguments and facts put forth by Ericsson.

Ericsson employees in Skellefteå also marched in support of their jobs. Over 200 gathered to protest a cutback decision. Ericsson has decided to reduce the number of employees within Connection Systems by 130. Only 50 employees will remain.

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130 workers laid off in Denmark

More than one in ten employees are being laid off at Ericsson's Danish company. The layoffs cut a broad swath throughout the organization, but hardest hit were workers holding traditional fixed and mobile telephony positions.

At the same time, Denmark will be acquiring greater global development responsibilities within new competency areas.

The cutbacks are the result of the changing market situation in Denmark and the company's worldwide austerity measures. Approximately 140 people will be losing their jobs

within various Danish facilities during the coming year. Recently, the company has experienced a sharp downturn within traditional technology areas.

"Denmark was fully digitized by the end of 1998. The GSM network is more or less complete. As a result, expense levels need to be adjusted to correspond to a lower volume of business within traditional telephony activities," says Conni Simonsen, manager of Ericsson in Denmark.

Mixed reactions

"Reactions have been mixed. Of course people are experiencing un-

certainty. But overall, the announcement has been received with remarkable understanding. Many realize that Ericsson needs to go through a reduction phase."

The company is not only implementing cutbacks, however. Recently, it became clear that the intelligent network services development center will be expanding. Denmark will acquire broader responsibilities for the development of network services for fixed and wireless telephone systems.

The company will also take on portions of the GPRS technology (General Packet Radio Service) for wireless broadband communication

as well as the development of a management system for broadband networks.

In a good position

"That puts us in a very good position. It shows that we have many of the right competencies required in the new world of telecommunications. A few people will also be able to transfer into the expanding operations. Unfortunately, there are only a few employees who have the background required to work with the new technologies."

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Measurable goals key to incentive pay

Everything is now essentially ready for the expansion of incentive-based pay at Ericsson. But first, a system is needed to set individual goals and to evaluate how individual employees fulfill them.

Such systems are already in place at some companies and will be introduced in most other countries where they do not already exist during the coming year.

The heated debate last autumn over incentive payments, and how they would be financed, has not stopped the work to develop new rules and policies.

Now, a worldwide framework is in place, stipulating the rules for companies or operations that wish to expand their usage of Short Term Incentives (STI).

These rules clarify what percentage of the fixed salary the STI can be for various groups of employees. They also explain how performance should be linked to financial results.

Local policies

"In every country where Ericsson operates, there should be a set STI policy, adapted to local conditions using the established framework," explains Ericsson's human resources manager, Britt Reigo.

"It is this locally adapted policy which should control everything. A prerequisite from management, however, is that there be effective systems in place for setting and evaluating individual goals. This is to ensure a linkage between incentive payments and the development of operations.

"Sweden is one of the countries which will see an expansion in the number of participants in STI plans during the upcoming year. It is envisioned that up to 15 percent of employees will be included."

Expanded option program

Ownership in Ericsson is another important means of motivation and performance improvement. The 1997 conversion program turned many employees into partners. In addition, an option program covering 500 key people, linked to Ericsson's financial result for the year, was implemented in 1998.

Now that 1998 financial statements have been completed, the outcome has been determined. Option distributions for those who participated in the program will be 83.51 percent of the maximum outcome.

"During 1999, we will be increasing the size of the group that is included in the option program. 2000 people will be included this year—who, is not yet clear. That will be determined within the next couple of months."

"Over the long term, we have ambitions of expanding the scope of the option program even more."

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ERICSSON 



Einar Lindquist was assisted by two artists who sketched the topics of discussion on a huge white screen. Photo: Thord Andersson

Firm grip on fixed systems

Something new and highly important is happening in the Wireline Systems business unit. With the appointment of Einar Lindquist as manager, the business unit has a new leader with excellent potential to achieve results. A general feeling of confidence could be felt when 1,600 employees of Wireline Systems staged a "kick-off" in the Victoria Hall of Stockholm International Fairs in Stockholm earlier this month.



An atmosphere of confidence could be felt among the 1,600 employees in the Victoria Hall at Stockholm International Fairs.

Photo: Thord Andersson

"Wireline Systems will become an even better place to work," Einar Lindquist said. "We have launched a new structure that will introduce new work methods for all of us."

Sluggish growth and weak profitability characterized the operations of Public Networks, the former name of Wireline Systems, during recent years. Customers, markets, partners, corporate management and the media were critical of the operations. Change became an absolute necessity.

Total scrutiny

Comprehensive efforts have been made to scrutinize all aspects of the business unit's operations, down to the most minute detail. Every phase of operations has been reviewed: research and development, products and product groups, delivery flows and inventories, marketing and sales.

"We have established close contacts with customers, our own market units and the rest of Ericsson's world. We have reviewed the products and systems we offer the market, unit by unit. The picture is clear now, and we know the lay of the land," says Einar Lindquist. "Our next areas of focus will be business development, simplification and customer confidence."

"We will become more business oriented by simplifying things for customers and ourselves, and develop greater confidence in ourselves and our dealings with customers."

The objective of the recent "kick-off" was to chart the business area's future course. Much of the day was devoted to discussions,

with all 1,600 persons in the audience taking part in small discussion groups. Ideas were tested and exchanged, all under the guidance of visionary Einar Lindquist. Two artists deftly sketched the topics of discussion on a huge white screen.

The following are a few samples of replies from the floor when this question was raised: What should we do to improve Wireline Systems?

"The unit is focused too strongly on Stockholm. Distribute resources more directly to customers around the world."

"Maintaining a presence in 200 markets should not be a form of blind objective. Get rid of unprofitable luggage."

"It's difficult to reach the large number of new small customers."

"Focus more strongly on customer business concepts."

"Try to understand that customers do not buy 'canned goods.' They are buying a future."

Enormous potential

The total market for Wireline Systems is large and expansive. Projected market growth shows an increase from SEK 400 billion in 1997 to slightly more than SEK 600 billion in 2001.

An important breakthrough was made a few weeks ago when Ericsson, in tough international competition, booked an order from British Telecom (BT) for a multi-functional network valued at more than SEK 3 billion. The NGN network (Next Generation Networks) offers integrated AXE, ATM and IP capabilities.

"Customers will have the final word in deciding our destiny," Einar Lindquist said. "If our customers are satisfied and we are able to conduct profitable business, the future is bright. If we enter into what might be called ill-advised business ventures, our future is bleak."

Fixed system growth

One of the business unit's major objectives today is to capitalize on Ericsson's enormous installation base, which comprises 140 million telephone and ISDN lines. The installation base offers a unique business opportunity. Within the next few years, global fixed networks will increase from 800 million local lines to 1,000 million.

There is no doubt that fixed telephony is, and will continue to be, the foundation of operations for most Ericsson customers in the Operators segment.

An important goal, accordingly, is to establish perfection in the business unit's delivery capabilities, starting immediately. Other important new measures and objectives will include the creation of access platforms for all customer groups and development of a common AXE platform and Customer Service portfolio in cooperation with Mobile.

Simplify everything that can possibly be simplified. And woe to the person who sends Einar Lindquist a monthly report that is longer than one page.

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Icelandic Oz.com is the new Ericsson IP-partner

Ericsson has signed a partnership agreement with Oz.com of Iceland.

The company develops sophisticated software for solutions and products that simplify Internet communications.

Ericsson and Oz.com plan to develop applications that will simplify cordless and fixed multimedia communications via the world wide web.

The agreement supports Ericsson's strategy for Internet business development.

The companies have been work-

ing together since 1996. Coordinated gains between both companies' product portfolios have already resulted in several new products. One example is a communications portal, which offers several different types of communications options.

Users can avail themselves of the options through simple applications comparable to the "clickable icons" that revolutionized the PC industry.

Increased influence

"The agreement provides us with greater potential to increase our influence in the IP-telephony mar-

ket," says Michael Turk, manager of the Datacom Networks and IP Solutions business unit. "We will develop a serie of service products that will offer new business opportunities for new and established operators."

Mutual confidence

Oz.com is an Icelandic company with headquarters in Reykjavik and San Francisco, in the U.S. The company has cooperated with Ericsson at trade fairs with the Ericsson World multimedia solution and Arena World, in the Helsinki Arena 2000 project.

"We want to offer new opportu-

nities for people to communicate with each other," says Skuli Mogensen, president and founder of Oz.com. "Our choice of Ericsson as a partner was based on mutual Scandinavian confidence and trust."

A new company, Link, has been established to manage the partnership within Ericsson.

Initial results of the partnership will be presented during the spring.

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HELLO THERE



Kennet Rådne

Kennet Rådne, president of Ericsson Software Technology, will shortly take over as manager of Ericsson Business Consulting, a new business unit of the Enterprise Solutions business segment.

► Who are you and what do you do?
"The unit comprises the main sections of Ericsson Data, Enterprise Networks Professional Services and Dedicated Networks – about 4,000 employees in 22 countries. Our mission includes responsibility for operations and development of Ericsson's internal IT-system. Primarily, however, our job is to sell business consulting services to other companies."

► What is the greatest challenge when you start your new job on March 1?
"Establishing sharp external focus and creating rapid growth. We're aiming at a position as one of the three largest players in our markets. We have many years of experience of selling and providing consultant services, system integration and operating services. We will also have the support of Ericsson's complete product range for the "New Telecoms World." Our main competitors will be companies such as Cap Gemini, Andersen Consulting, the Sema Group and Computer Science, but we also look upon these companies as potential business partners. Acquisitions and alliances with other companies are important elements in our growth strategy."

► Mention a few examples of your business consulting services.

"Our customers are large companies and organizations. However, we also serve companies with business concepts based on the utilization of information and communications technology (ICT), so-called "high-tech start-ups." A particularly hot sector comprises all types of solutions that support customer contacts with the market, such as call centers and electronic trading, for example. Of course, we shall also offer operations and maintenance services for customer's internal telecom and data networks as well as IT-systems. The main driving force will be our objective to generate profitable growth in sales of services in the enterprise market, thereby creating demand for Ericsson's products."

► The Network Operators Business Segment also has a Business Consulting unit. Differences and similarities?

"Our business concepts are basically the same, but we deal with completely different customers. The other unit concentrates exclusively on the operator market."

Lena Widegren

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Mobile phone helps check streetcar times

Soon, the citizens of Gothenburg, Sweden, will no longer be taken by surprise by streetcar and bus delays. Using their mobile phones, Telia subscribers will be able to receive up-to-the-minute information, at any time, specifying departure times from individual stops.

Commuters who have submitted their route information via the Internet, will be able to receive warnings if their morning ride to work is delayed. Telia Mobile, located in Gothenburg, is developing the Info Traffic service which will relay traffic information using mobile telephones.

Field testing was started last autumn and the system could be

ready for use by Telia subscribers as early as the end of February.

"Plans have been in place for a long time to develop such a traffic system, but it is only now that the technology has been up to the challenge," says project manager Ulf Johansson.

In brief text messages, using Short Message Service (SMS) technology, Info Traffic users tell the system which stop they will be departing from. The reply, which comes within a few seconds, contains information about which buses and streetcars pass by that stop and how many minutes are left until the next departure on each route.

"By simply pushing a few buttons I'm able to find out whether I can take it easy or if it's time to run," says Ulf Johansson.



Residents of Gothenburg will soon be able to receive streetcar departure information on their mobile phones. Photo: Kamerareportage

The information used by Info Traffic is retrieved by Telia from a regularly updated database operated by the Gothenburg Traffic Office information system. The database is updated every minute and when a route experiences delays, departure times are adjusted accordingly. Info Traffic users can rest assured that the departure times provided are accurate.

"We have developed a special Info Traffic function," explains Ulf Johansson. "Using a web site on the

Internet, commuters can program in their routes, listing their departure time and the stops between which they travel. Should their particular route experience delays, Info Traffic sends out a warning message to their mobile telephone. Commuters can then choose to either take an earlier departure or another route, hopefully making their connections with other trains or buses."

Niclas Henningson

New contracts for faster mobile networks

In competition for GSM customers, a growing number of operators are now investing in faster, cordless data communications. During recent months, seven operators have bought Ericsson's HSCSD technology, which offers data speeds four times faster than today's 9.6 kbps.

HSCSD (High-Speed Circuit Switched Data) is the first important datacom function to be integrated in the GSM system. With data speeds up to 38.4 kbps, cordless users now have the same datacom functionality they have at the office. Most private homes and many smaller offices are restricted to fixed modem transmissions at 28.8 kbps.

The new circuit-switched solution is highly suitable for applications that rely heavily on real-time, such as video transmissions and transmissions of large data files via e-mail.

"One application area for HSCSD is traffic supervision, in which a video camera transmits images over the mobile network. Firemen working under emergency conditions, for example, can also use the technique to quickly establish images of certain buildings," explains Fadi Pharaon, marketing manager of Ericsson's cordless data communications within GSM.

Operators with modern GSM networks only have to upgrade their software to achieve functionality with the new technology. The solution also means that unutilized

capacity in mobile networks can be used more effectively, since HSCSD users are only allotted free time-slots.

"High-speed data communications will become a huge market. It's strategically important, therefore, for mobile operators to offer datacom solutions. A question of prestige is emerging, with operators vying to be the first to attract cordless datacom users," Fadi Pharaon continues.

The first operator to buy Ericsson's HSCSD-solution was SingTel Mobile in Singapore. Other operators to follow suit include TIM of Italy and Telenor of Norway. Several operators are waiting to launch their systems in mid-1999. Their first objective, however, is develop new mobile telephones with high-

speed datacom capabilities. Several mobile telephone manufacturing companies are now in the starting blocks, ready to launch new models for high-speed datacom.

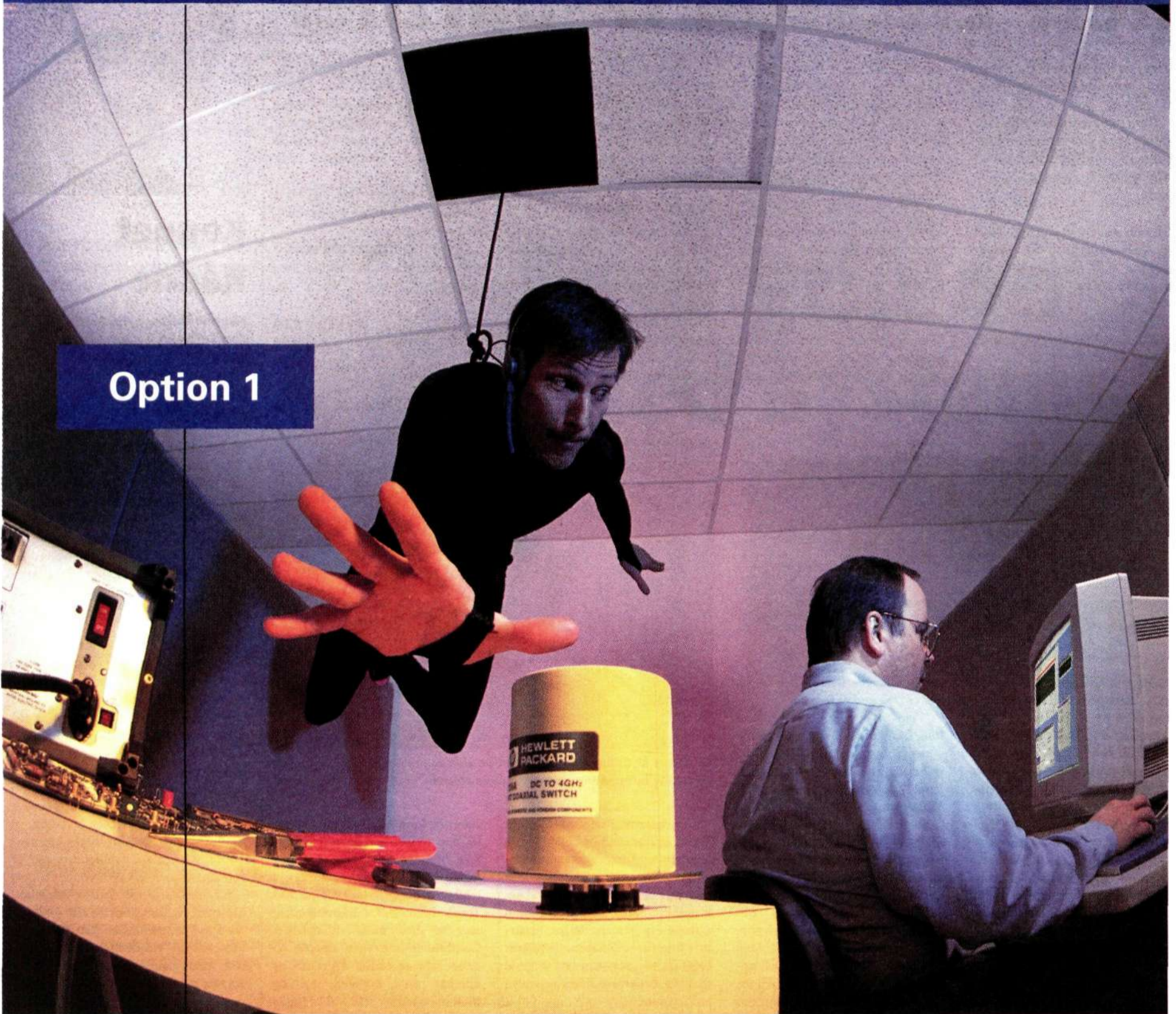
The next giant step for mobile operators will be the introduction of packet-data solutions in their networks. Ericsson's GPRS-solution (General Packet Radio Services) offers 115 kbps adapted for both GSM and TDMA networks. Packet-data represents an important step into third-generation mobile telephony systems, and Ericsson received orders early in 1999 for the new technology from T-mobil and Omnipoint of Germany.

Nils Sundström

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It's not always convenient to "procure" test accessories from your colleagues. That's when you call HP DIRECT. With the help of HP engineers, choose from a selection of over 800 HP microwave test accessories. This ad will self-destruct in 10 seconds.

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Italy 39 02 9212 2241 • Netherlands 020 547 6669 • Norway +47 22 73 57 59 • Poland 48-22-7230066 • Spain 34 91 631.13.23
Sweden (08) 444 2277 • Switzerland (French) (022) 780 4361 • Switzerland (German) (01) 735 72 00 • United Kingdom 01344 366666.

SEK 4 billion order from Turkey

Turkcell, the largest GSM operator in Turkey, recently ordered equipment valued at SEK 4 billion from Ericsson. Turkcell today has two and a half million subscribers in its network. When the equipment that has been ordered has been installed at the end of the year, the network will have the capacity to handle five million users.

Turkcell placed its GSM network in service in 1993 and the number of subscribers has risen sharply right from the start. Turkcell is currently one of the world's ten largest GSM operators in terms of growth. Turkey, with a population of 65 million, has a mobile telephone density of 5 percent, a figure that is expected to rise to 10 percent by the end of the year.

"The equipment that we will begin to install for Turkcell in March will increase the network's capacity in all the larger cities and also along the coasts of the Black Sea and the Mediterranean," says Sören Ahlstedt, Key Account Manager for Turkcell at Ericsson Telecomunikasyon in Istanbul.

Turkcell's owners include Sukurowa Holding, a Turkish industrial group, and Sonera, the former Telecom Finland, in which Sukurowa holds a majority interest. In addition to Turkcell, there is another GSM operator in Turkey – Telsim, which currently has 1.1 million subscribers.

Ericsson has just completed in-

stallation of a "prepaid call" system for Turkcell and the operator will introduce this service as soon as possible. Based on the success of "prepaid" in countries where it has been introduced, Turkcell is preparing for a rapid rise in number of subscribers, and increased capacity is therefore necessary.

Fast installations

The pace of the installation work that will begin in March will be very rapid. Seventeen hundred sites – locations of the radio base stations – have to be completed in nine months, corresponding to an average of 50 sites per week. In addition, 72 nodes have to be installed.

"This is a turnkey project, which means that Ericsson is responsible for all of the work except procurement of the sites where the base stations will be located," Sören Ahlstedt explains.

Turkcell and its competitor Telsim both have their GSM systems on the 900 MHz band.

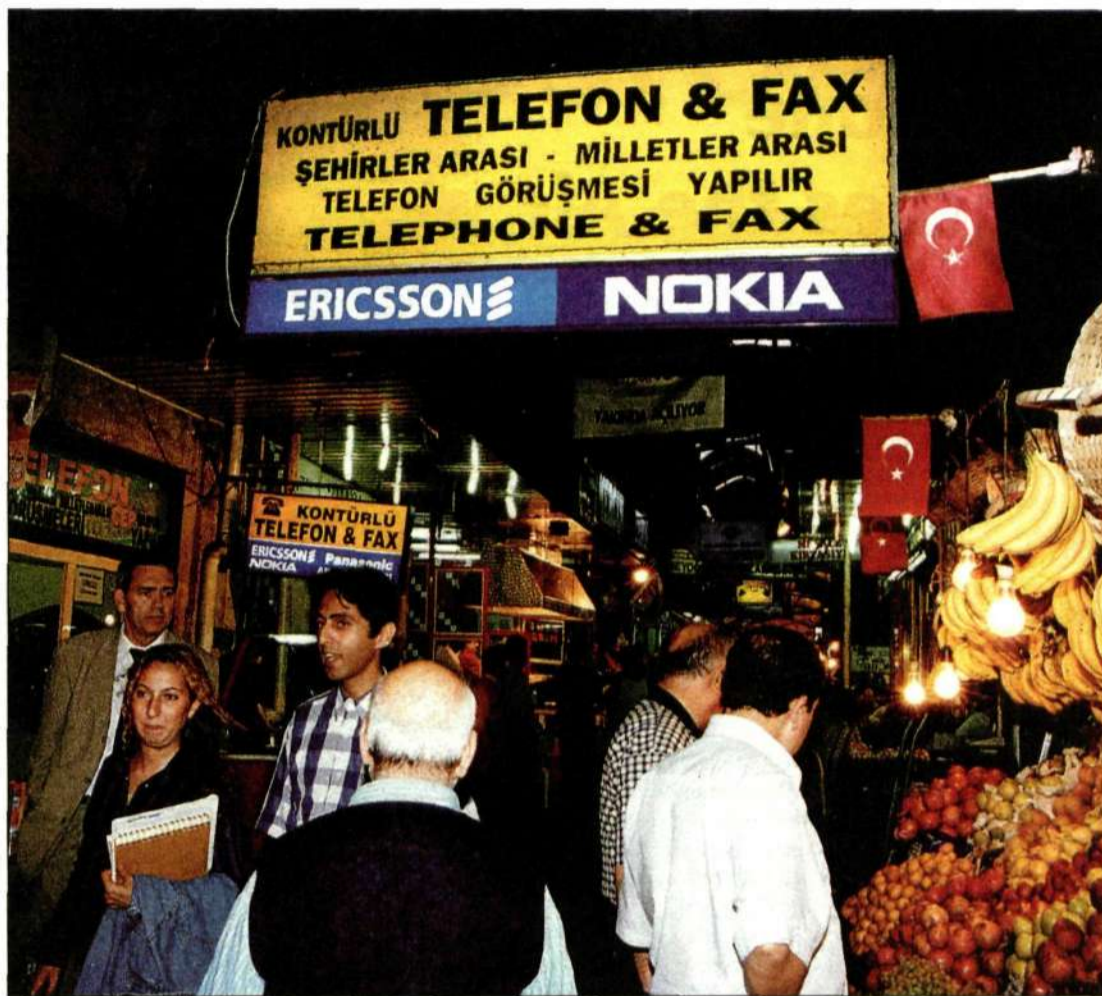
As yet no licenses have been awarded in Turkey for GSM MHz operations. There will be a general election in Turkey in April and no new licenses will be granted before then. When licenses for 1,800 MHz can be awarded will depend entirely on what happens after the election.

Ericsson's mobile telephones are popular in Turkey and account for nearly 60 percent of the market.

In an interview published in CONTACT in the autumn of 1996, Turkcell's president, Cüneyt Türktaş, said that the company's ambition was to be a leading GSM operator not only in Turkey but in such neighboring countries as Azerbaijan and Georgia and in the so-called "stan" countries.



Sören Ahlstedt



In the bazaars in Istanbul, the stands are packed together and everything is for sale: food, clothes, jewelry, mobile phones – maybe even flying carpets!

Photo: Thord Andersson

"And it has succeeded," Sören Ahlstedt confirms.

"Turkcell today is operating GSM systems in three countries outside Turkey: Azerbaijan, Georgia and Kazakhstan. All three networks are being expanded continuously and this is particularly true in Azerbaijan, which has the largest system, with 54,000 subscribers. Ericsson

has supplied equipment for all three systems.

A "new/old" market

Turkey is a "new/old" market for Ericsson. It delivered equipment to the old sultan around the turn of the century. In the November 1928 edition of an Ericsson publication, one could read about the ceremonial in-

auguration of the automatic telephone exchange in Smyrna, the present Izmir. Ericsson, which became the sole supplier to the Turkish PTT, was well known in telecom circles, and its dominance was nearly total up until 1967.

Gunilla Tamm

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Rapid network construction after flooding

Ericsson has constructed a GSM network in the flood-ravaged Hubei province in China in a very short period of time. Ericsson replaced the existing network in the capital city of Wuhan and constructed a network with a capacity for around 600,000 subscribers in 80 days.

"After an event like this, it is essential that we show the customer that we are there for them. This is based on friendship, and you don't abandon your friends. That is why it was important to finish the network on time, in spite of the flooding," says Zou Rensheng, manager of the Wuhan office.



Zou Rensheng

Extensive and complicated

In May, Ericsson received a SEK 600 million order from the Wuhan telecommunications bureau. The project was extensive and complicated, especially since it required a certain amount of cooperation from Italtel, which had installed the origi-

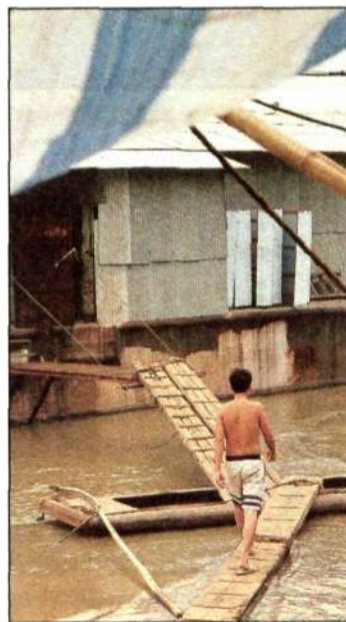
nal network. Only two weeks later the rains came and Hubei province was subjected to major flooding. The installation work was postponed.

Telecommunications in the province were severely damaged. The financial loss totaled around RMB 40 billion (approximately SEK 40 billion). One hundred thousand people in the province were forced to abandon their homes.

The work of constructing the new GSM network could not resume until two months later, at the end of August.

"The majority of the equipment was packed and ready at the site in Sweden, ready to be delivered to the customer. This was one factor as to why the project was completed as quickly as it was," says Anne Laukkanen, marketing support officer for Hubei province.

Due to cautionary measures prior to the year 2000, Chinese authorities had ordered a halt in construction from the middle of November until after the New Year. All installation had to be completed before this time. Thanks to weekend work and good cooperation between Ericsson and the customer, who carried out part of the installation work, everything was completed on time. On



Last summer's floods were the worst to hit China since 1954. 223 million people – a fifth of the country's population – were affected by the catastrophe.

Photo: Mia Widell

December 4, responsibility was transferred to the customer.

"They were very happy and thankful that the work was carried out so quickly. Now there are 150,000 subscribers and that num-

ber is increasing by 10,000 per month," says Zou Rensheng.

This year, the telecommunications bureau in Hubei will decide if another expansion project for GSM will be carried out. If so, it will apply to the expansion into several areas outside the capital city of Wuhan.

"Ericsson is in a very good position here," says Zou Rensheng.

The Chinese authorities have tightened regulations regarding the purchase of telecommunication equipment. The new regulations mean tougher requirements for the localization of production in China and that foreign telecommunications companies must use local subcontractors.

"We are actively working to increase localization of our mobile systems in the Chinese market. We aim to achieve this partly through the production of Ericsson products in China and partly by beginning to use local subcontractors or by localizing our global suppliers," says Jan Moen, localization manager for operations in China.

The authorities have approved six domestic and four foreign suppliers of telecommunications equipment. Ericsson, Nokia, Alcatel and Siemens have been approved and, in principle, will be the only foreign

telecommunications suppliers who will be allowed to deliver equipment.

"Despite the fact that we have been chosen as one of the four foreign suppliers, this does not guarantee us any competitive advantage. The idea behind the new regulations is to help local suppliers take market share. Our objective is to retain the market share we have," says Mats Jensen, manager of mobile telephony in the Chinese market.

Financial weaknesses

Those suppliers who were not approved account for 20 percent of the market, market share that will presumably now go to domestic suppliers. Many domestic companies suffer from financial weaknesses and the authorities are trying, through the new regulations, to improve the profitability of these companies. Domestic companies' stronger position in the market may also result in a greater price squeeze.

Effective January 1, 1999, all contracts must be entered into with local companies using the local currency, renminbi (RMB). Ericsson has joint venture companies in China who can enter into these contracts.

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COLUMN



Bobby Chang

Vodafone touches the Air

After months of negotiation and recent competition in the bidding war with Bell Atlantic and MCI WorldCom, the British company Vodafone Group PLC bought AirTouch Communications Inc. for USD 62 billion of stock and cash on January 15, 1999.

This is the biggest deal yet in the wireless communications industry. After completing the merger sometime later this year, the new company Vodafone AirTouch PLC's headquarters will be in England with San Francisco as its U.S. and Asia Pacific regional headquarters. The combined company will be the world's biggest wireless communications company, with 23 million mobile phone customers in 23 countries. Based on January 17, 1999 prices, it will have annual revenue of USD 9.9 billion and an estimated market capitalization of USD 110 billion.

Merger trend

In line with the merger and acquisition heat of recent years, 1999 will continue this trend and telecommunications is one of the industries that bear the highest volume of merger activities. In 1998 we have seen the biggest mergers such as SBC acquiring Ameritech for USD 61.4 billion, Bell Atlantic acquiring GTE for USD 52.8 billion, AT&T acquiring TCI for USD 37 billion, and so on and so forth.

This year the focus will be in the areas of wireless and data networking. The number of wireless users in the U.S. has boomed from 1.6 million to 66.5 million in the past decade.

In 1994, AirTouch was spun off from Pacific Telesis, one of the regional holding companies of the Bell systems. In January 1998, AirTouch acquired the wireless operations of US West Media Group for stock valued at USD 4.3 billion and became the second largest U.S. wireless service provider behind AT&T. Scale and scope of coverage are extremely important in the wireless communications market, AirTouch also owns a 25 percent stake in PrimeCo Personal Communications LP. The acquisition of US West operations increases AirTouch interest of PrimeCo to 50 percent (the other half is owned by Bell Atlantic).

Vodafone and AirTouch began their merger negotiations in 1997. They are already partners in Globalstar, a satellite-based mobile phone company. For AirTouch, the deal offers an international holding that Bell Atlantic cannot provide. On the other hand, buying AirTouch will give Vodafone access to the U.S. marketplace. Vodafone's victory over Bell Atlantic marks the most significant foreign ownership in the U.S. wireless market.

Vodafone's stock price increased 15 percent immediately after the merger announcement. However, after the acquisition, Vodafone AirTouch still lacks a U.S. nationwide presence such as that held by AT&T Wireless, Sprint PCS and Nextel Communications.

Cultural differences

The cultural difference between AirTouch and Vodafone might create some problems for the combined company. In addition to generous package for upper management people, AirTouch offers stock options to all employees up to 10 percent of their annual salaries if AirTouch stocks closed at USD 65 or higher for 15 consecutive days. Its management team is highly respected in the industry. The integration with Vodafone has put the 13,000 employees in the dark about their future. It is very difficult for two different corporate cultures and management styles to co-exist. Some people believe that Vodafone will eventually sell its U.S. properties to Bell Atlantic. Another major issue is third generation mobile systems. The merger might help the harmonization process.

As more and more national and even global supercarriers join the playground, the real losers of mergers are the regional operators. After completing the merger with GTE, Bell Atlantic has to find another target company to expand its wireless coverage.

On the other hand, MCI WorldCom is the only major U.S. operator that does not offer mobile services. It is a leader in local, long-distance and data markets while trying to remain out of the mobile battlefield. Will its strategy work or is integration of mobile and data an unavoidable part of the future? Will the company change and acquire a mobile player?

Bobby Chang works with Business Intelligence for Ericsson and specializes in North America. He will contribute more articles in coming issues.

FINLAND TOPS DENSITY LIST

Finland has the highest mobile telephone density rating in Europe. Italy has the most mobile subscribers. Mobile telephony users per capita in Europe increased from 14 percent to 25 percent over the past year.

	Number of mobile subscribers, thousands, 1998	Percentage of population, 1998
Finland	2,981	58.46
Norway	2,121	48.19
Sweden	4,258	47.84
Iceland	106	40.85
Italy	20,600	36.08
Denmark	1,760	33.46
U.K.	13,001	22.07
Netherlands	3,347	21.32
Greece	2,037	19.59
France	11,071	18.89
Spain	7,051	17.90
Germany	13,925	17.02

Source: Dagens Industri, Global Mobile

Illustration: Björn Lindberg

Qualcomm eliminates 700 jobs

Approximately 700 employees of Qualcomm are to be made redundant. Intensified competition in the American mobile telephone market has been cited as the reason for cutbacks in the workforce.

Most of the terminated jobs will affect Qualcomm's mobile systems division. The company is trying to reduce the number of employees to 10,500.

www.qualcomm.com

BT and Microsoft form Internet alliance

Microsoft, the American software giant, and British Telecom (BT) have entered an alliance to offer wireless access to the Internet, including new data services for companies in all parts of the world. Some analysts believe the alliance will compete directly with the Symbian program of cooperation between Ericsson, Nokia, Motorola and Psion. Tests of new services will begin in the U.K. this spring. Commercial services are expected to be launched early next year. BT will use Microsoft's micro-web browser for services presented on mobile telephones and held-held computers.

www.bt.co.uk

www.microsoft.com



Is my flight delayed? SAS has introduced a new flight information system based on SMS messaging.

Flight delays to your telephone

Scandinavian Airlines (SAS) has introduced a system to provide information about flight delays. You can now check if your flight has been delayed via SMS messaging. You can also submit questions about specific flights to the airline company via SMS and receive answers on your mobile telephone. The service is now being tested in cooperation with Europolitan, a Swedish telecom operator. Hopefully, the system will soon be available to all callers. About 300 persons are taking part in the initial tests, which began in February.

INDUSTRY NEWS

Alliance between Cisco and Motorola

Cisco, the datacom company, and Motorola, a leading American telecom company, have created an alliance to develop a new framework structure for Internet-based wireless networks. The solution will be entirely IP-based.

The companies plan to invest more than USD 1 billion over the next four-five years.

Major gains will be derived from combining the freedom of mobile telephones and other portable devices with access to the enormous amounts of information offered by the Internet. Cisco and Motorola will develop wireless transmissions of IP-traffic.

www.cisco.com

www.motorola.com

Nokia introduces a new model

Shortly after Ericsson announced the launch of its new T28 mobile telephone, Nokia parried with news about a dual-band model that can be used on three systems. Nokia's new 6185 telephone is equipped for 800 and 1900 CDMA transmissions and the analog AMPS-system on 800 MHz.

Bank services via mobile telephones

Nokia and the Finnish-Swedish bank MeritaNordbanken have entered a partnership for bank services using mobile telephony.

The program will be based on Wireless Application Protocol (WAP). MeritaNordbanken already offers bank balance information via the SMS service to mobile telephone customers. The service was introduced about a year ago and is now used about 200,000 times a month.

Parking fees paid over the phone

Motorists in Stockholm will test a new system this autumn whereby parking fees will be paid over their mobile telephones.

To qualify for participation in the program, drivers must have a credit card issued by a major gasoline company and have their cars registered in the system.

This will mean that a motorist parking a car will pay only for the time the car occupies the parking space.

Average phone bill: SEK 3,500 a month

The average European's mobile telephone bill is about SEK 3,500 a month. Residents of the Netherlands "ring up" average monthly phone bills of SEK 6,000, while Finns are more taciturn, with monthly bills averaging about SEK 2,000.

These figures were provided by Global Mobile.

Not only Ericsson...

Difficult and long names for services and products are not unusual within Ericsson. If it's any consolation, we are not alone. Dagens IT, a Swedish trade publication, reports that 3Com, the networking company, has released something it calls "Three-Tier Carrier-Grade Total Control IP Telephony System." The magazine also expressed hope that it won't be shortened to TTCGTCIPTS.

Michael Thurk, pioneer in Boston

Two hundred people will be employed at Ericsson's new Boston office over the next two years. Michael Thurk, manager of Datacom Networks and IP Services, wants to have a powerful sales support organization in place by the summer for each of the regional market units. The headquarters for Ericsson's focus on data communications for fixed networks are beginning to take shape.

Michael Thurk has no time to lose. He is building a new company within the company – an organization that will form the basis of much of Ericsson's datacom focus. The headquarters of the business unit is being established in Burlington just outside Boston on the American east coast, and will house about 200 hundred people.



Michael Thurk

The idea is to lure the industry's best brains away from the competition in the Boston and New York area, to Ericsson. Ericsson personnel from Dallas in the US and from Stockholm may also be enticed to join this new business unit in Boston.

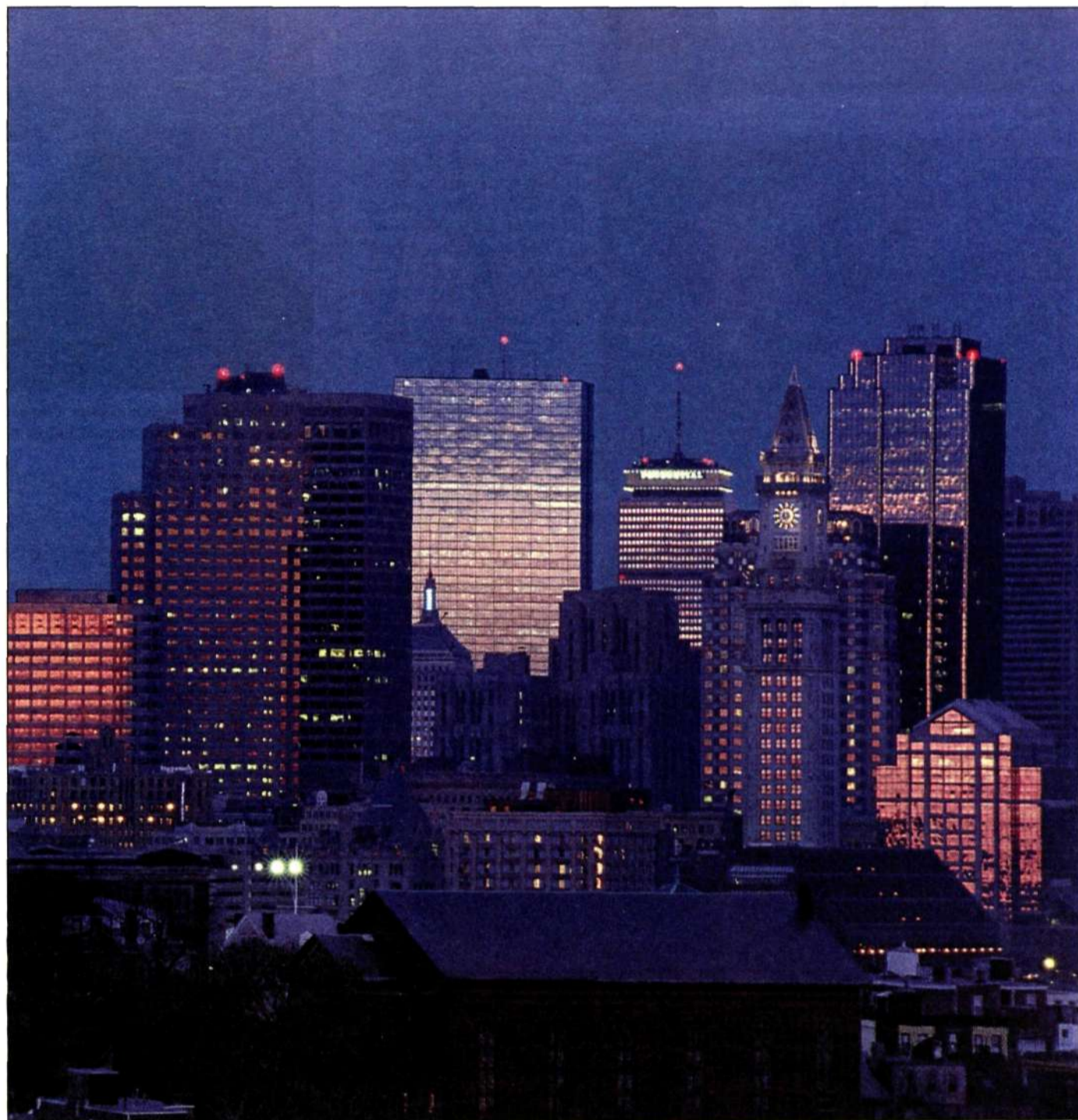
Some key positions are already filled. Laura Howard has been recruited from 3Com to take on responsibility for the business unit's marketing communications. Gus Hof, in charge of operations, joined the company from GDC.

Michael Thurk wants the Boston operations to concentrate primarily on sales and marketing.

"We have recruited several capable managers who can attract highly qualified personnel," says Michael Thurk. "I am looking for people who possess a true entrepreneurial spirit. We need employees who are interested in working in a small, newly started company, and can still feel comfortable working in a large organization."

A critical choice

Boston is one of the four most important datacom centers in the U.S. Many promising new companies have established themselves here, and all of Ericsson's main competitors in datacom and IP are represented in the area. Competitors such as Nokia, 3Com, Bay Networks and Siemens all have offices and operations in this area. An important task facing Michael Thurk is to spread Ericsson's message to people in the industry. He talks about Ericsson's datacom strategy and how it is to be realized: "I spend at least one week every month talking with customers, shareholders and Ericsson employees regarding our strategies and directions. Our investment in datacom represents a critical strategic decision for Ericsson. We have considerable expertise in ATM, routing and IP. The job now is to match it to customer requirements in a focused way. We can't be all things to all people, but rather now we must concen-



The business unit Datacom Networks and IP services' head office is being set up outside Boston on the American east coast.

Photo: Alex Farnsworth

trate and build a firm base from which to grow."

The headquarters in Boston are to be supported by datacom operations in Nacka, in the south of Stockholm. "It is extremely important that we continue to be global. The Stockholm office is our gateway to the European market."

Michael Thurk commutes between two desks separated by the Atlantic. His schedule does not permit him to fully reside at either point. His work situation is made possible by two assistants, one in each location. "It will be hectic for at least another half-year, until we have the startup phase behind us. I am glad we chose Boston, which overlaps Stockholm by two to three working hours."

The demands on Michael's time involve creating a global team which includes the important organizations in Stockholm and Boston, as well as the newly acquired ACC operation in Santa Barbara, California. One of Michael's first actions at Ericsson was closing this important first acquisition.

"Now the challenge is to combine these different groups into a culturally diverse, yet cooperative and creative global group. Building on the different skills of each group will enhance the organization," he says.

As to what constitutes good management,

DATAKOM NETWORKS AND IP SERVICES' BUSINESS UNIT

The Datacoms Network and IP Solutions business unit accounts for a considerable portion of Ericsson's investment in data communications for fixed networks. It offers the market products and network solutions for access networks, large data networks and IP-based communications services. This includes routers, IP switches, ATM switches and

software for Internet communication applications.

Target groups include large companies and organizations, as well as operators and Internet service providers (ISP). The acquisition of and investment in niche data communications companies is an important growth strategy.

Michael Thurk defines it as the ability to use the right management style at the right time. At times it's important to lead and at other times it's important to create a democratic result, while sometimes you should follow. He values responsiveness and flexibility.

"I try to live up to my ideal that the best leadership comes from active participation with the team. I consider myself more a team captain than a manager. I don't want to interfere where others have the skills and the responsibility. Delegation is very important and really trusting people to take the best action for the customer and the company."

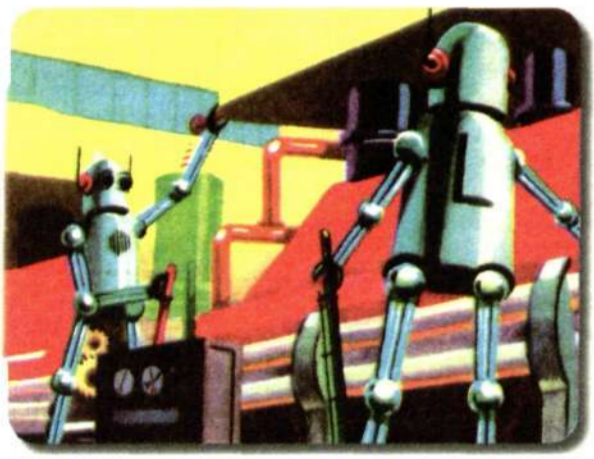
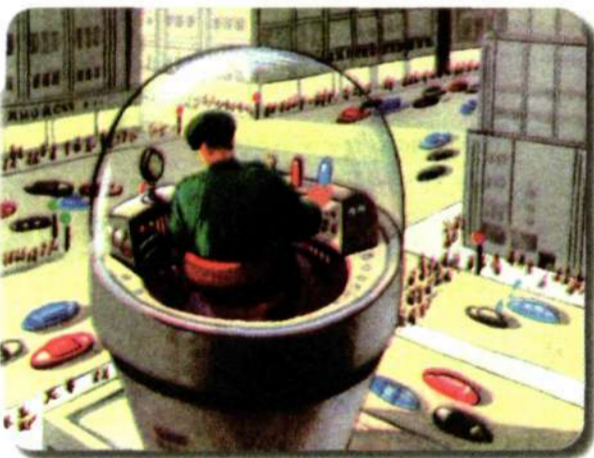
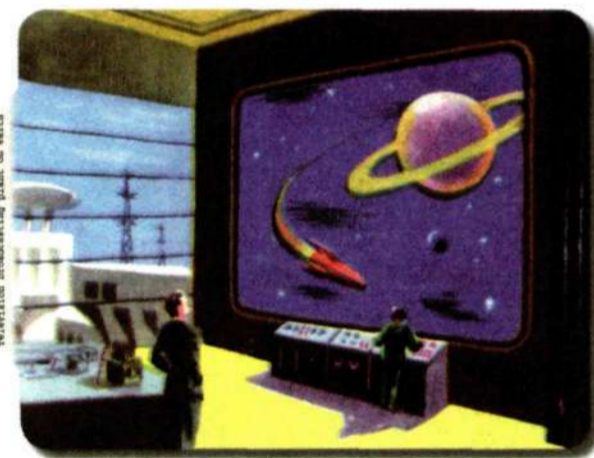
Challenge

Michael Thurk joined Ericsson slightly more than six months ago, attracted by the challenge of building an entirely new organization

backed by Ericsson's resources. "It is highly satisfying work. Ericsson's datacom expertise is excellent. In a very short time we have developed several products that can compete with those of the leading datacom suppliers. The job facing us now is to match that expertise to customer requirements globally. Each key target market has its needs and we must be responsive to those needs."

"The high-tech industry is like astronomy," says Michael, referring to one of his hobbies, "much of it is still unknown. That is part of the charm of this job. Look in any direction: it is impossible to say what the future will be like in five years or twenty years – a heady feeling!"

Lena Widegren
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A home connected to the rest of the world. Visions of the future, pure science fiction in the 1950s, are now on the way to becoming reality. A large number of home-electronics devices, from the coffeemaker to the PC, are already programmable via computer networks. The new Ericsson e-box, which can steer all communication to and from the home, has the potential to become a keystone in the new architecture for home networks.

The phone jack of the future is here. A variety of electronic equipment for the home can be integrated with Internet access. The result: smart houses, with a whole new range of electronic services.

Ericsson is building a new infrastructure for intelligent homes, a global market that may well exceed mobile telephony.



With the e-box, Ericsson makes a powerful contribution to the development of "intelligent homes" and the e-service market. The basic concept was introduced by Malte Lilliestråle, now business development manager for the system. Photo: Nils Sundström

New horizons for tomorrow's homes

An increasing number of electronic devices used in the home contain communications components and are programmable. To date, controlling such devices as a TV, washing machine, CD player or doorbell in a uniform manner has not been possible. Now, however, the means to change this situation are at hand. The proliferation of IP networks, common industry standards and open interfaces provide the technical prerequisites.

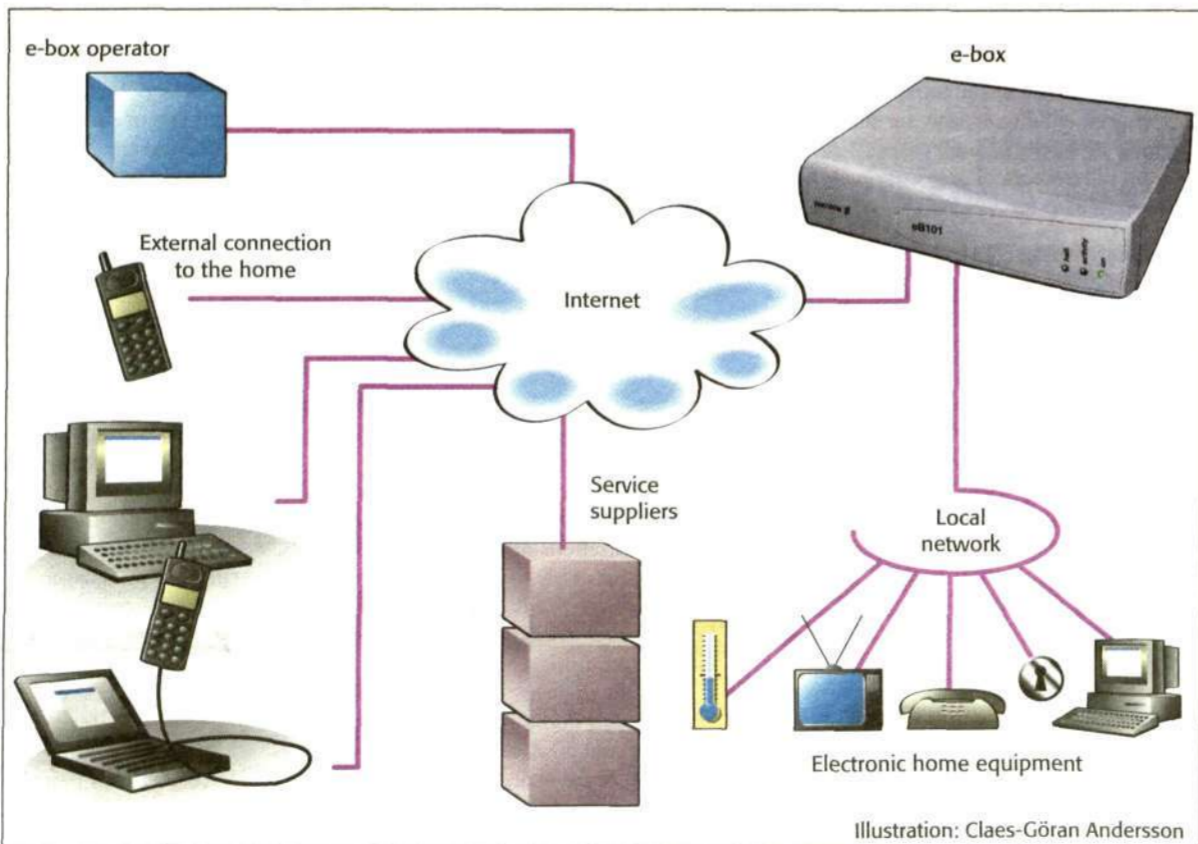
"The deregulation of the telecom market is the driving force of this infrastructure. Telephone and cable-TV companies see new business opportunities in delivering a wide range of services to households. At the same time, new opportunities are being created for service suppliers," says Rolf Johansson, marketing manager for Ericsson's

e-box system, which is currently being launched.

The e-box serves as a link between the local home network and a larger access network, such as the Internet. The e-box is a type of thin server containing services that the customer can select to monitor or control various systems in the home.

Today, there are already solutions that allow electricity meters to be read automatically, heating systems to be regulated from a mobile phone and PCs to be connected to other home equipment.

The e-box is a new concept in that it offers a simple way to control all electronic devices in the home yet is administered and maintained by the network operators. This makes it convenient for the consumer and opens the door to a whole new world of applications.



autumn of 1997, and studied the market for this type of solution. The idea at the time was to develop a business concept and then sell it. Our group has now become a core unit," relates Malte Lilliestråle, business development manager for the e-box system.

He is convinced that the market for the new home networks will separate quickly into three sectors: service suppliers, network operators and consumers.

Not only the e-boxes

"We will turn to our traditional customers – the operators. The real business opportunity for Ericsson is not to sell e-boxes, but to provide operations and management services," says Malte Lilliestråle.

Customer-driven market

Several industry watchers envision a future scenario where numerous electronic devices will be connected to an IP network by thin servers.

"This is the phone jack of tomorrow, and the beginning of a gigantic, customer-driven market. The customer subscribes to various services while the operator owns, operates and maintains the e-box. This means that the operator's role is that of distributor and system custodian for the services that the customer orders from various service suppliers," Rolf Johansson explains.

Ericsson developed the e-box from sketch to finished product in one year and four months. The basic idea is the brainchild of Malte Lilliestråle, previously with the research department of Ericsson Radio Systems.

"We started as an 'innovation cell' in the

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<http://nsbo.ericsson.se/e-services/>

Pilot GSM-IP integration

Ericsson has developed an office solution integrating GSM and IP telephony. U.S. operator Powertel is currently testing the technology, known as "GSM on the Net."



Niclas Forsvall

The solution represents a major step in the interconnection of office data, telecom and multimedia services over the existing LAN, enabling the user to switch easily between different forms of access depending on the situation.

A single telephone number can be used to reach a GSM number, a fixed telephone or a PC phone. Moreover, the solution makes GSM calls within the office area cheaper, since the company creates a GSM network by installing a small base station.

"The combination of IP solutions and mobility is critical for a company's ability to increase its service level and become more accessible and flexible vis-à-vis its customers," says Niclas Forsvall, who is in charge of the product unit for GSM on the Net.

"We are targeting primarily GSM operators. For them, this represents an opportunity to handle all data and telecom data traffic for their enterprise customers. At the same time, all mobile-phone users within an office are connected to the operator outside the office area as well."

GSM on the Net has inspired widespread interest since its introduction in June last year.

"The important markets include Europe, North America and parts of Asia that have mature GSM operators and well-developed IP networks," says Niclas Forsvall.

Nokia has a similar GSM solution, but pilot systems have not yet progressed as far as Ericsson's.

During the autumn, Ericsson delivered the world's first IP-based GSM test systems to American operator Powertel in Georgia. Additional test systems are expected soon, and Ericsson is working closely with Sweden's Telia to develop the new technology.

"GSM on the Net is a potentially revolutionary product for our enterprise customers. The combination of mobility and IP solutions creates completely new opportunities for companies to enhance their business processes," says Per Englund, who is in charge of corporate solutions at Telia Mobile.

"We believe that this system will generate most of our new sales to enterprise customers within two or three years. As a result of technological development, the traditional office switch is declining in importance."

Ericsson's work on GSM on the Net began in the form of an innovation cell consisting of seven people in the spring of 1988.

Today, GSM on the Net is a product unit of some 70 people sharing full responsibility for the product. Several designer units and internal partners are involved in the development work.

"We are still seeking key expertise to ensure that Ericsson will be the leading supplier of IP-based total communications solutions for companies," says Niclas Forsvall.

The first commercial versions of GSM on the Net will be delivered during autumn 1999.

Nils Sundström

<http://www2-rmog-bts.ericsson.se/gsip/>

Ericsson Promotion Services

For some of us the winter is at the moment very obvious. Ericsson Promotion Services offers a number of products adequate as Ericsson gifts, for the frozen one.

For more information please see:
<http://www.rem.ericsson.se/eps>

ERICSSON

The art of returning from

an overseas job

Employees feel enriched by the experience.

That is the great advantage of working overseas according to Viktoria and Orvar Hurtig, who recently returned after two years in the U.S.

The Hurtig family returned to Sweden last summer, after being stationed at Ericsson's Dallas, Texas facility. Viktoria, and their two-year-old daughter Matilda, returned early in order to enjoy the Swedish summer. Orvar remained until September in order to finish up his contract work.

Working abroad was an idea that was sparked by an inquiry from the company. Orvar was in charge of a training unit at Ericsson Hewlett-Packard in Mölndal when he received the offer to put together a similar operation in Dallas.

"We had never actually contemplated moving overseas. I liked the offer and saw the big career challenge that moving to one of the world's most important telecom centers involved. But I didn't think Viktoria would be especially interested."

"No, I can't say that I took the bait immediately," says Viktoria. "The U.S. felt very distant to me, since I greatly value being in close proximity to family and friends. But the offer was attractive and came at an opportune time. I was pregnant with Matilda and it was appropriate to take maternity leave while living in the U.S. for a few years."

Orvar signed the contract and began his new job in Dallas in late summer 1996. Viktoria, and their newborn daughter Matilda, followed six months later at Christmas.

Received training

Before the move to Dallas, Viktoria and Orvar took International Assignments' preparatory course at Telefonplan in Stockholm, which consisted of two days of training on what they could expect in their new country.

"The course was very good," says Orvar. "In general, the company invests a great deal of resources in preparing their overseas employees prior to departure. The support we received on our return home was not as good, however. Everyone says that coming home is the most difficult, but the company was glaringly absent in that regard."

Orvar feels that he has been lucky. He returned to the same work assignment he held prior to the move, and he feels that he has benefited greatly from his experiences in Dallas. But he has heard stories about colleagues who have returned home to the black hole of unemployment.

"In general, I feel the company should show greater interest in the experiences that overseas employees bring home with them. I suggest some sort of debriefing, where they could share their impressions from abroad. For those who experience difficulties in adjusting upon returning home, there should be some opportunity available to meet and talk with others in the same situation."

For Viktoria, her return home was not as

painless. During their two years in Dallas, she had become used to the rich American social life. The reality of everyday life in Sweden seemed rather lonely by comparison.

"This past summer, I was really depressed and I had an intense longing to return to Dallas, to its warmth and to all my friends. It's a fairly big deal to return home after being gone for two years. But one's return to Sweden is not nearly as dramatic for family and friends. People who take a break in their old lives by moving overseas, experience time very differently than do those who stay home. Sometimes it feels as though our friends and family hardly noticed that we were gone."

Difficulties diminish

Viktoria has now returned to the teaching job she had prior to her years in Dallas. Her longing to return has diminished as she has readjusted back into her old life.

The move to Dallas was much less demanding than their homecoming. The problems they experienced in establishing themselves in a new country were on a practical level.

"The most difficult part of the move was all of the administrative problems we were confronted with; all of the calls we had to make to American authorities to obtain American social security numbers, drivers licenses and everything else one needs as an American citizen," says Viktoria.

"But we received good help from Ericsson in Dallas," continues Orvar. "We attended a two-day orientation course. But the most important links to American society were, without a doubt, my new work colleagues. They were the ones who helped us find doctors and those sorts of contacts."

A large portion of Orvar's time in his new country was quickly consumed by work. Establishing the new operation was demanding.

"I have always worked hard, but in the U.S. it was extraordinary. It felt, somehow, as though I was expected to invest a lot of energy in my work. I was sent over by Ericsson to work, and the company invested a great deal of resources in order that my family and I would feel comfortable."

Active social life

Viktoria quickly became a part of the extensive social network of expatriate Swedes in Dallas. During the day, she socialized with wives of other Ericsson employees in the large Swedish colony. She arranged breakfast meetings, sang in a choir and attended sewing circles. One evening a week, she worked at the Swedish school.

"Being an outsider in a new country binds people together," explains Viktoria. "You seek out other Swedes and become more Swedish than ever. At the same time, you are influenced



The knowledge that "the big step" does not have to be so big is one valuable experience that Viktoria and Orvar Hurtig gained by moving overseas for a few years. It is a lesson that will be valuable throughout life.

Photo: Lena Bryngelsson/Kamerareportage

by American social habits. Several nights a week, we would gather to have barbecues and have a fun time together."

What advice would Viktoria and Orvar give to others who are on the verge of going overseas?

"First and foremost is to be prepared for the fact that returning home can be a little problematic. For those who are not returning to the same position they held when they left, it is a good idea to ensure that you actually have something to do when you return home," says Orvar.

"Another important piece of advice is to take along those household items and other things that one really likes," says Viktoria. "When we moved, I packed old things that we could get rid of in the U.S. before we returned home. I thought that was a very practical idea, but it turned out to be a big mistake. My longing for my favorite things soon became quite intense!"

Orvar wants to put in a good word for electronic communications – an invaluable link to the homeland while abroad.

"Make sure you train grandma and grandpa in how to use e-mail!"

Niclas Henningsson

Researcher:

A feeling of vulnerability and lack of job satisfaction. Those are a couple of the problems that might face those who choose to work overseas for a few years. Family situation and the ability to handle stress determine how well people can handle change.

Ingrid Anderzén, a researcher at the Karolinska Institute, monitored 60 families for six years – before, during and after being stationed overseas. Together with her advisor, Professor Bengt Arntz, she conducted interviews and regular health check-ups, and has mapped out the psycho-social factors participants experienced during their stays abroad.

Her group has included contract employees



Ingrid Anderzén

Companies should take greater responsibility

from a number of Swedish companies. Almost one third of those are Ericsson employees.

Ingrid Anderzén reached the conclusion that companies should take greater responsibility for their employees during their actual stay abroad. Today, most employees receive preparatory training prior to departure, but often nothing after that.

Contact easily lost

"Most of the people in my study had little or no contact at all with the organization they left after having been abroad for some time. They quickly felt abandoned and vulnerable. Unfamiliarity with the culture of their new workplace meant that they were unable to meet the demands they had placed on themselves, and when they didn't have anyone to talk with, their job satisfaction decreased."

Those stationed abroad can, of course, make contact with their home unit, but for those who are dissatisfied with themselves and their

efforts, it can be difficult to take the initiative. That responsibility should rest with the company.

"Everyone who travels abroad should have a contact person who is stationed in the same country. A mentor who, among other things, would have the task of talking regularly with the person stationed abroad and ask how things are going. It would be a big relief to be able to talk with someone who knows what it feels like."

It is also important to maintain contact with one's home unit in order to prepare for the return home.

Many participants in Anderzén's study returned to an organization where they no longer had a clear place.

"I've met individuals on their way home after three years abroad who didn't know what they would be doing, where they would be working, or where they would be living when they returned home," says Ingrid Anderzén.

"They remain employed but have not received any information. Thirty percent of the participants in my study changed companies within a year of returning home."

The situation for those who accompany someone who is stationed abroad depends on how the employee perceives their role. This is where Anderzén's study differed from previous studies, which have shown that it is the spouse's situation which is the determining factor.

Important to find meaning

It is important for spouses to find something to fill their new lives with. Ingrid Anderzén is careful to stress the importance of the accompanying spouse deciding in advance what he or she will do. It is difficult to find something after arriving abroad.

What spouses choose to do to fill their time is less important. Few find jobs of their own, instead most use the time abroad to study or



Maintaining contact with the organization you left is incredibly important during an overseas stay, according to Ulf Grufman and Carin Göthlinder. Photo: Niclas Henningsson

Very easy to fall through the cracks

Contacts with organizations back home need to be nurtured, according to Ulf Grufman, manager for Ericsson's International Assignments department.

All of the company's overseas placements are administered by the International Assignments department in Stockholm. Ericsson employees, worldwide, who are offered and accept placements for longer than a year, sign contracts and reach agreement on the terms for their assignment with the department.

Employees departing from Sweden have close contact with the International Assignments department. Among other things, Swedish overseas employees and those family members joining them, attend a course.

"The course addresses issues such as cultural differences and how people communicate in various countries," says Carin Göthlinder, who is in charge of the course.

Similar courses are also arranged for employees who go abroad from countries such as the U.S. and Australia.

One risk during overseas placement is a lack of contact with the organization one has left behind. Although the assignment is temporary and one's employment in the home unit remains, employees who are on overseas assignment during a reorganization back home can easily end up falling through the cracks. He or she is reduced to a name on a piece of paper, and upon arriving home no longer has a natural position within the organization.

In order to avoid this, Ulf Grufman requires those placed overseas to maintain relationships with their home unit.

"Contacts are like flowers which need to be watered. Overseas workers should make an effort to maintain regular contact, and visit their old workplace on those occasions when they are back home."

Those who maintain their contacts stand a better chance of avoiding problems upon their return, an otherwise problematic aspect of being stationed abroad.

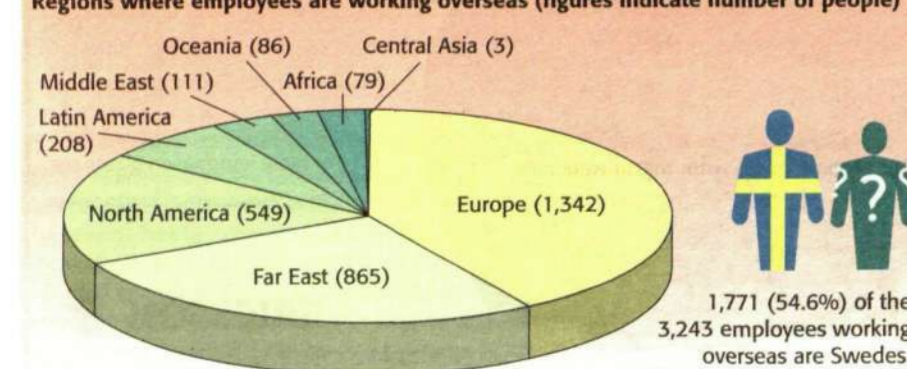
"In order to make the adjustment easier, some form of follow-up is now being planned. The International Assignments department is working together with company doctors, counselors and psychologists," explains Carin Göthlinder.

"We see a need and, together with our partners, have taken the initiative on this issue. A final proposal has yet to be completed, but we are working on it."

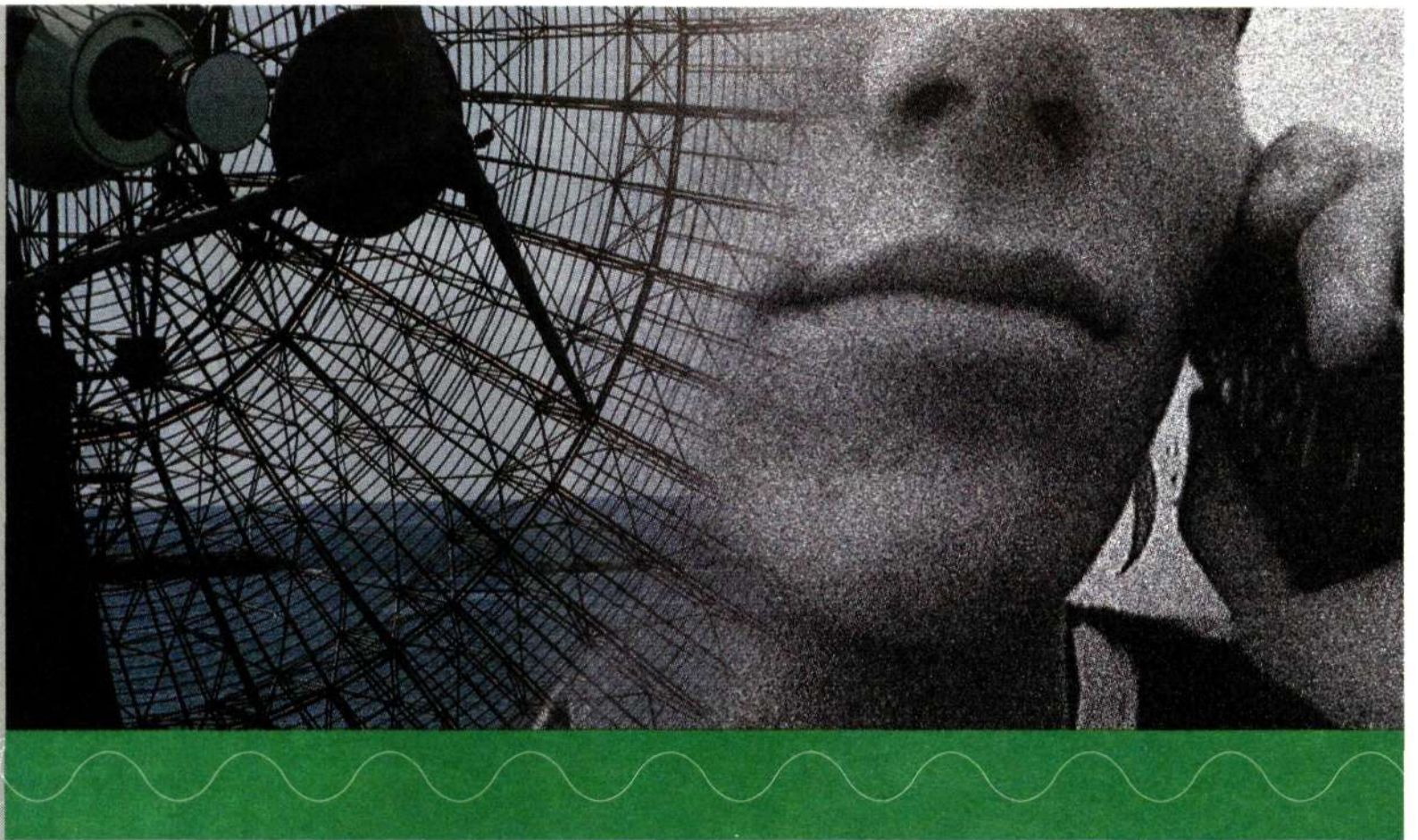
Niclas Henningsson

3,243 ERICSSON EMPLOYEES LIVE OVERSEAS

Regions where employees are working overseas (figures indicate number of people)



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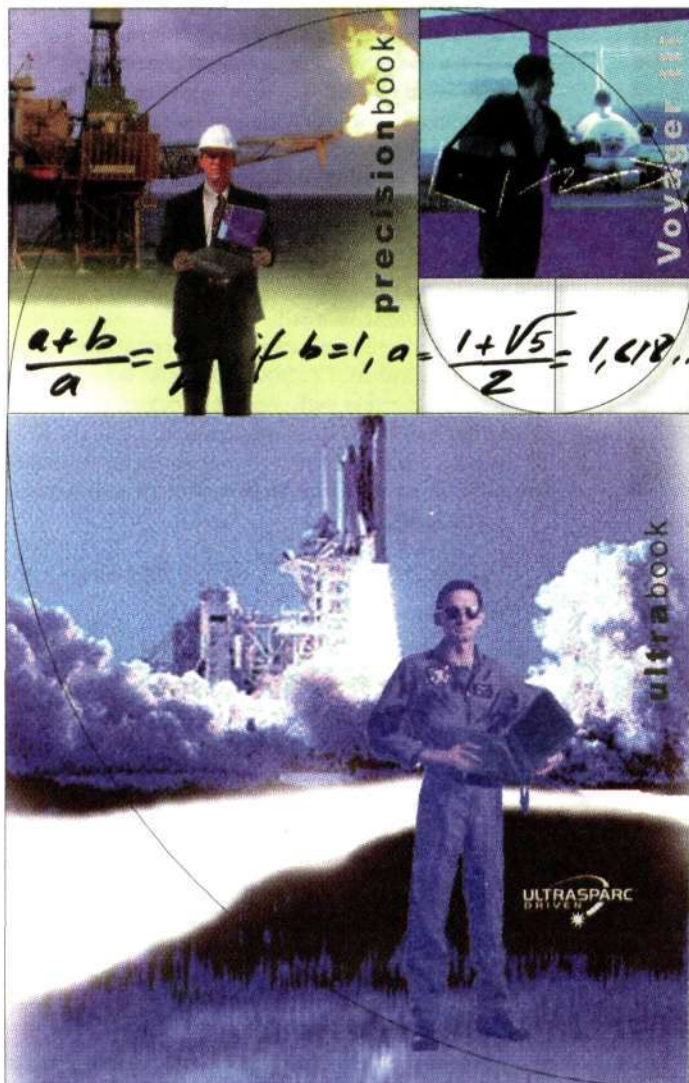
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The other name for Taiwan is Formosa, which is Portuguese and means "the beautiful island." The building in the picture is part of the National Palace Museum in Taipei. The Museum houses such collections as the porcelain brought by Chiang Kai-Shek when he left mainland China in 1949.

Photo: Gunilla Tamm

Made in Taiwan

Mobile phones: now it's the turn of the Taiwanese

Taiwan, which has not been so badly affected by the economic crisis in Asia, is an interesting market. Ericsson has supplied equipment to three of the country's seven mobile operators and, this year, licenses for fixed telephony will be issued, providing opportunities for broadband and multimedia technology.

TAIWAN - A LAND OF SMALL ISLANDS

Taiwan's official name is Chunghua Min-kuo, the Republic of China (ROC). The country consists of the main island, Taiwan, plus 77 small islands. The Formosa Strait, which at its narrowest point is only 130 kilometers wide, separates Taiwan from the People's Republic of China.

Formosa is a Portuguese name, and it was the Portuguese armada which brought the island to the attention of the Europeans in the

16th century in Europe. They called it *Ihla Formosa*, "the beautiful island."

Today, Taiwan has slightly more than 22 million inhabitants in an area which is roughly the same size as Florida. The population is 85 percent Taiwanese, that is, Chinese who immigrated to the island between the fourteenth and seventeenth centuries. The remainder are Chinese who came to Taiwan in 1949, when Chiang Kai-Shek fled from Mao's communists.

Industry is dominated by high-tech products, such as personal computers, scanners and CD players, for which the country is a world leader.

Ericsson has been active in Taiwan since 1982, when a technical office was opened. Ericsson Taiwan Ltd. was created in 1987.

Today, there are seven mobile operators in Taiwan and Ericsson has supplied equipment to three of them.

With a growth rate of five percent last year, Taiwan is a country that has not been as badly affected by the economic crisis in Asia as other countries. It is an interesting market for Ericsson and three operators have chosen the company to supply equipment for their mobile systems. Now the fixed telephony system is also to be liberalized and it is likely that two licenses will be granted in 1999.

The liberalization of the Taiwanese telecoms market began in 1997, when eight licenses for mobile telephony were granted. These licenses were for GSM on the 900 MHz and 1,800 MHz frequencies.

"We got on our marks and prepared for Ericsson receiving several orders," says Bengt Bergvall, president of Ericsson Taiwan.

"And we got what we had been hoping for, which was almost half of the market, or 45 percent to be more exact," he adds.

Taiwan is divided into three telecoms regions



Bengt Bergvall

CONTINUED ON NEXT PAGE

CONTINUATION FROM PREVIOUS PAGE

and in each region, one license has been granted for GSM 900 and one for GSM 1,800. In addition two licenses for 1,800 were issued for the whole of Taiwan. Ericsson is now supplying GSM equipment to the operator Far Eas-Tone, which has received one of the national GSM 1,800 licenses and one 900 MHz license for the northern region. In addition, the operator TransAsia, which received the GSM 900 license for the southern region, chose Ericsson as its supplier. These assignments have been taken care of by Ericsson's office in Kaohsiung, which has about 30 employees. Both Far EasTone and TransAsia began commercial operations with their mobile networks at the start of last year.

Ericsson in Taiwan was created in December 1987 and 80 percent of the company is owned by Ericsson, while 20 percent is owned by the Taiwanese electronics company, Teco.

Difficult to recruit personnel

Ericsson Taiwan currently has around 300 employees, compared to only about 100 three years ago.

There is a lack of experienced telecoms technicians in Taiwan and, in order to recruit personnel, radio advertising has been used, in addition to employing people via recruitment companies and university contacts. Mobile telephones have turned Ericsson into a company that the Taiwanese are fairly familiar with.

During spring 1988, Ericsson signed its first contract for a mobile telephone system in Taiwan. It is an analogue system of the American AMPS standard covering the entire island, and the operator is the state telephone company that goes by the name Chunghwa. The company also has a GSM system, which was brought into operation in 1994.

Capacity too low

"A few months ago, Ericsson received an order for equipment to increase the capacity of Chunghwa's AMPS network, which had been experiencing problems for some considerable time. That had meant that the operator was losing as many as 10,000 subscribers every month," says Joseph Sun, the key account manager for the Chunghwa account. "Today, the operator has 630,000 users as part of its network. At the beginning of the year, roaming to the U.S. will be possible and voice mail was introduced some time ago."

"We are also making efforts to interest the customer in digitizing its AMPS system," Joseph Sun explains. "If this happens, then Taiwan will become the largest single D-AMPS market in Asia."

Some of the previous AMPS subscribers have switched to Chunghwa's GSM 900 network, which was launched four years ago and currently has 1.3 million users. Nortel is the supplier of that equipment.

When eight mobile telephone licenses were issued in 1997, Chunghwa was one of the operators that received a license for GSM 1,800 for the whole of Taiwan, and this network was launched a few months ago.

Competition from Motorola

Five years ago, Ericsson's GSM telephones were introduced in Taiwan and they have been enjoying great success since then. The telephones have also made Ericsson well-known. Motorola has the largest market share today with 40 percent, while Ericsson is second largest with 29 percent. A serious competitor is Nokia, which has increased from 15 to 25 percent.

"Prepaid was recently introduced and this has led to increased demand for simpler telephone models, while the replacement market has become increasingly important," says Levis Hsu, who is responsible for terminals.

Bengt Bergvall believes in a positive future for Ericsson in Taiwan. Mobile telephony is highly successful and in just one year, mobile telephone density has increased from six to twenty percent.

It is probable that two licenses for fixed telephony will be granted this year. This may offer an interesting opportunity for Ericsson to enter the fixed sector in collaboration with a local operator.

"For fixed telephony, the network is well developed and 51 percent of the population has a telephone. We see opportunities particularly in broadband and multimedia," explains Bengt Bergvall and adds that Ericsson has two competitive advantages.

"We are already present in Taiwan and are a relatively well-known company and we already know the intended operators in the fixed telephony sector quite well."

In Taiwan, there is huge interest in the third generation of mobile telephony. Those in power hope that this will be a growth sector in the same way as the PC industry has been. It is mainly telephones for the third generation systems that the Taiwanese are interested in producing.

The country missed by the Asian crisis



Gunilla Tamm
gunilla.tamm@era.ericsson.se



Crowds of people in Taipei, the capital of Taiwan.

Photo: Lars Åström/Världsbilden

High demands from modern customers

Far EasTone in Taiwan is a good example of the new operators in mobile telephony. Established about two years ago, the company has more than 1,200 employees today and more than 800,000 customers in its GSM network, which began commercial operations on January 20, 1998.

"We were the first GSM operator to invest in dualband from the very start, and now operate the most highly integrated 900 and 1,800 MHz network in the world," says Joseph O'Konek, President of Far EasTone.



Joseph O'Konek

"When the mobile telephone market was liberalized here in Taiwan, and eight licenses were granted to operators, Far EasTone received two of the three most attractive licenses," says Claes Odman, Key Account Manager for Far EasTone at Ericsson Taiwan, in Taipei.



Claes Odman

One of the licenses is used for GSM dualband in northern Taiwan, the country's most densely populated region. The other license is for 1,800 MHz throughout the entire island.

Run as a multinational company

Far Eastern Group, a Taiwanese family-owned industrial group, owns 60 percent of Far EasTone, with 10 percent held by AT&T and the remaining shares owned by various local companies, including a Taiwanese bank. Far Eastern Group has highly diversified business activities in the textile industry, hotels and department stores. Although technically a Taiwanese company, Far EasTone operates in a manner similar to a multinational company. Its board of directors includes representatives of American Express, CitiBank and McDonalds.

When Joseph O'Konek talks about the formation of Far EasTone, he often refers to the creation of a corporate culture and systematic ef-

forts to develop a brand name from the very beginning.

"Our company was established to improve the quality of people's lives, and we must never forget that it's all about people," Joseph O'Konek states emphatically. When asked how many subscribers are served by his company's GSM network, Mr. O'Konek replied that Far EasTone serves customers, not subscribers. The company operates in the consumer sector, he explains, which is also one of the reasons it's so important to develop a strong brand name and nurture customer loyalty.

Good customer service wanted

Long before the GSM network was launched, prospective customers were asked what they expected of their telecom operator. The answer was they wanted the latest technologies and good customer service provided by a stable company that would remain in operation in the future. Far EasTone conducts continuous customer surveys to make sure the company is headed in the right direction.

"Even before Far EasTone was granted its telecom licenses, the company had established close cooperation with us through AT&T and decided to select Ericsson as their supplier of telecom equipment. The company's decision to invest in dualband from the very beginning was also an important factor," says Claes Odman.

Joseph O'Konek believes Ericsson is an excellent partner, and business relations between the two companies have been intensified by their joint efforts to solve various problems. He is also very satisfied with Ericsson's fast installation work.

The Finnish competitor more receptive

"However," he continues, "I was disappointed that Ericsson did not have any telephones for dualband when we launched our network. When the phones were eventually introduced, there were no models available with Chinese characters. In this respect, a Finnish competitor has taken the lead and seems more receptive to market demands."

Despite its capacity as a GSM operator, Far



J.M. Chien and Ron Lu at Ericsson Taiwan Ltd, inspecting the site of one of the base stations for Far EasTone's GSM network. This dualband network has been installed extremely quickly.
Photo: Gunilla Tamm

EasTone regards itself as more than a mobile telephony operator.

"Licenses for fixed telephony will be granted later this year. Our largest investor, the Far Eastern Group is very interested in this opportunity. Far EasTone sees many opportunities in various market segments available with the rapid convergence of data and voice communications and the promise of IP technology," Joseph O'Konek says.

Claes Odman regards Far EasTone as a good example of today's telecom customers, companies that place high demands on partnerships with their suppliers.

"We have an excellent chance to show that Ericsson does much more than sell products—we also provide complete telecom solutions," he concludes.

Gunilla Tamm



Taipei is a modern city and, although there is traffic congestion, the air quality has improved in recent years thanks to the trains that use bridges above street level.
Photo: Lars Åström/Världsbilden

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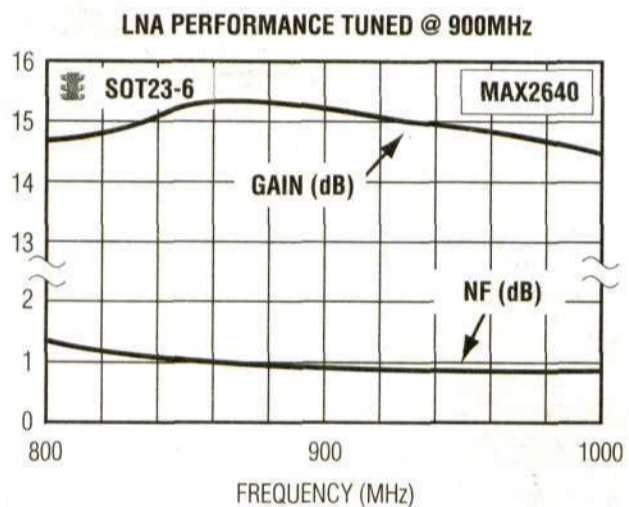
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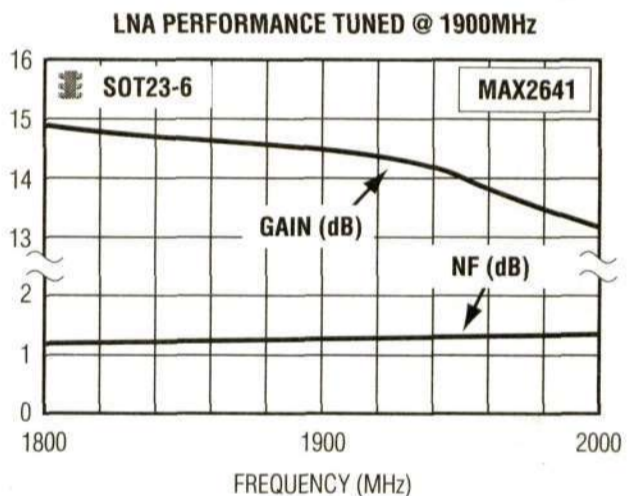
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We're increasing sales in Germany

Karl Alsmar has been manager of Ericsson Germany for the past year and a half. He is still struggling to learn the German language, but it's getting easier all the time. Employees appreciate the fact that he speaks their language, and most business discussions with customers are conducted in German.

Ericsson Germany had a good year in 1998. Deregulation of the German telecom market increased business demand. Many new operators became customers, increasing operator sales by approximately 20 percent. Prospects for 1999 are even more favorable.

"We're a supplier to more than 20 different fixed network operators," says Karl Alsmar.

Relations with its biggest customer, Mannesmann Mobilfunk, continue to develop positively. Mannesmann made larger than expected orders for its D2 network, due to the rapid growth of mobile telephony, an area where the company is now expanding more rapidly than the overall market.

250,000 new subscribers a month

Mannesmann's D2 network has expanded by as many as 250,000 subscribers a month. The D2 network, with close to 5.5 million subscribers, is clearly bigger than Deutsche Telekom's T-Mobile network. Mannesmann stock skyrocketed during 1998. The company purchases approximately half of its exchanges from Ericsson and the other half from Siemens. In terms of base stations, Ericsson is the largest supplier, with approximately 80 percent of the market. Siemens is, however, the biggest supplier for Mannesmann's fixed network Arcor.

Germany is also a major market for minilinks. Mannesmann ordered units for an entire region last year. Ericsson supplied 100 percent of the minilink units for the new E2 mobile network, which started up last October. That sale is going through Bosch. E2 is owned by Viag, BT and Telenor.

Ericsson is also the main supplier of exchanges for the new operator Otelo.

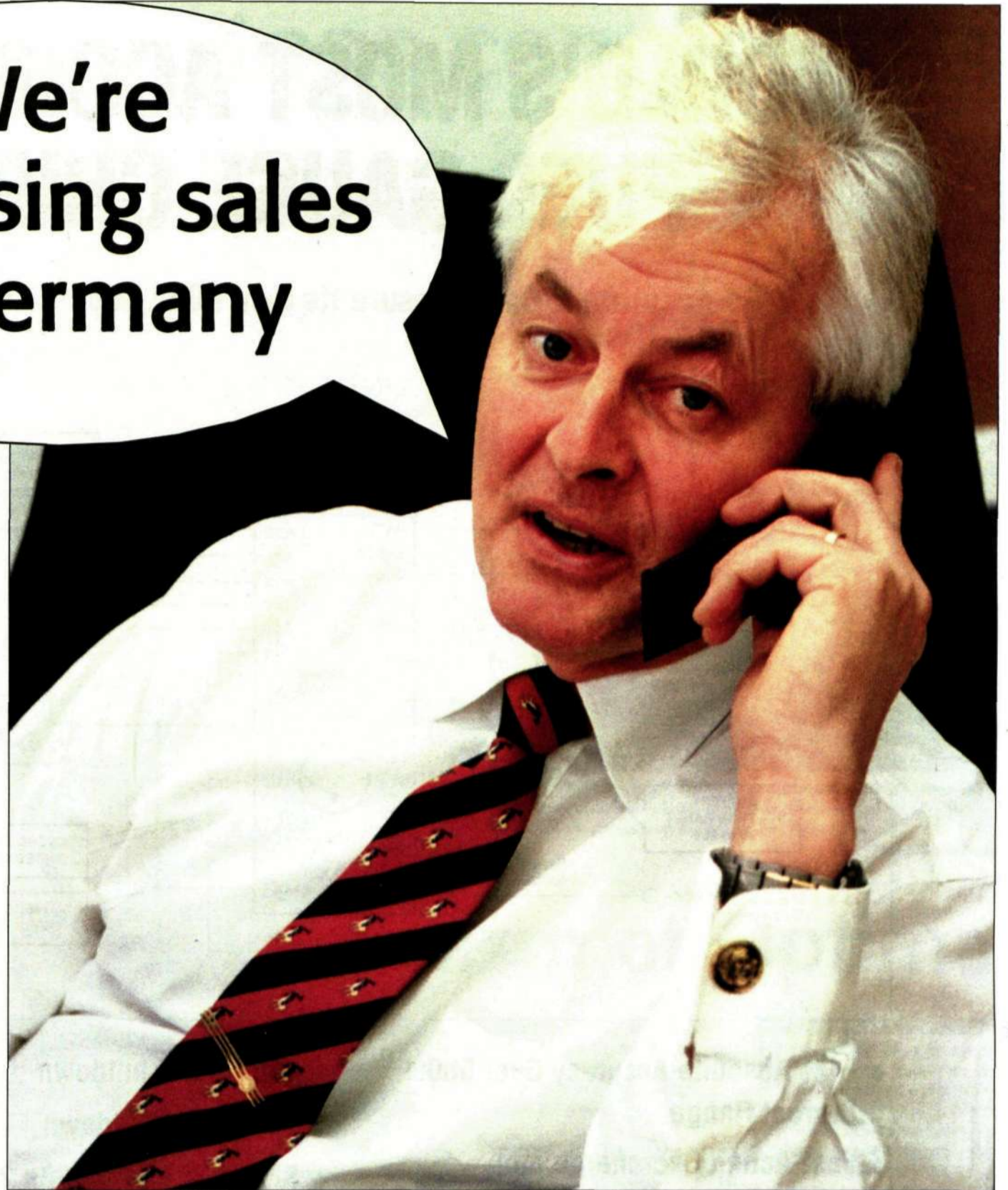
"All of their national network exchanges are AXE," says Karl Alsmar. "Now we are expanding our business into other product areas. We recently received a large contract for Wavelength Division Multiplexing (WDM) transmission equipment."

A veritable explosion of newly formed telecom companies has taken place in Germany since market deregulation occurred. Many have their headquarters in other countries but want to get a piece of the lucrative German market. Denmark's Talkline and RSLCom, based in the U.S. and the U.K., are but two examples. Others include WorldCom, Interroute, Espri, First Telecom and Telemidia. All of them are Ericsson customers.

Big customer abroad

Telecom giant Deutsche Telekom (DT) is not a major infrastructure customer of Ericsson Germany.

There have been problems with suppliers which have only recently been solved. Deutsche Telekom is, however, a big customer in several other countries including Italy, Poland and Asia. Ericsson is the main



Swede Karl Alsmar is the head of Ericsson Germany, which had a good year in 1998. Business has taken off with the deregulation of the German telecommunications market and expectations for 1999 are high.

Photo: Thord Andersson

ERICSSON GERMANY

Sales in 1998 exceeded SEK 8 billion (approximately 870 million Euros). The company offers complete telecom solutions from all of Ericsson's business segments.

The number of employees is 2,000, of which 1,000 are active in research and development. The average age is 35 years, and 30 nationalities are represented.

Headquarters are located in Düsseldorf with operations at eight other locations.

supplier for DT's investment in Cellcom in Malaysia.

On the consumer side, Deutsche Telekom is a very large buyer of mobile telephones. Siemens and Nokia, with their strong brand names, are tough competitors, however. The overall market for mobile telephones in Germany was just over six million units in 1998.

"Sales are going very well with upper-end phones such as the 688, 788 and 888 models," says Karl Alsmar. "But at the moment, it is the lower-end segment of the market which is growing the most, and that is an area where Ericsson doesn't offer a significantly competitive alternative."

As many as 70 percent of mobile telephones sold are in that lower-end segment. Most new customers just want a basic telephone that they can use to talk with. The number of subscribers is increasing all the time.

At the beginning of 1998, approximately 10

percent of the German population had a mobile telephone. By the end of the year that number reached 17 percent.

Current predictions indicate that number could climb to 25 percent this year. That means an overall market of around 11 million telephones in 1999.

Prices for telephones and subscriptions continue to fall amidst fierce competition between the many operators. This is especially the case now that a fourth mobile telephone operator, E2, joined the market on October 1.

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Enterprise Solutions on right track

The former problem area, Enterprise Networks, expanded by almost 20 percent last year, exceeding market growth. Service is the only growth area, especially Managed Services, a kind of third-party service for those customers who want it. Call Centers is another area that is experiencing rapid growth.



Ericsson's new building in Düsseldorf, inaugurated on January 13.

"Among other things, we sell consulting services to companies who are building up Call Center functions," says Karl Alsmar. "It's part of Business Consulting operations and has often resulted in Ericsson also supplying all of the equipment."

An independent study, conducted in 1998 by the research company Dataquest, showed that Ericsson had a 24 percent share of the Call Center market in Germany.

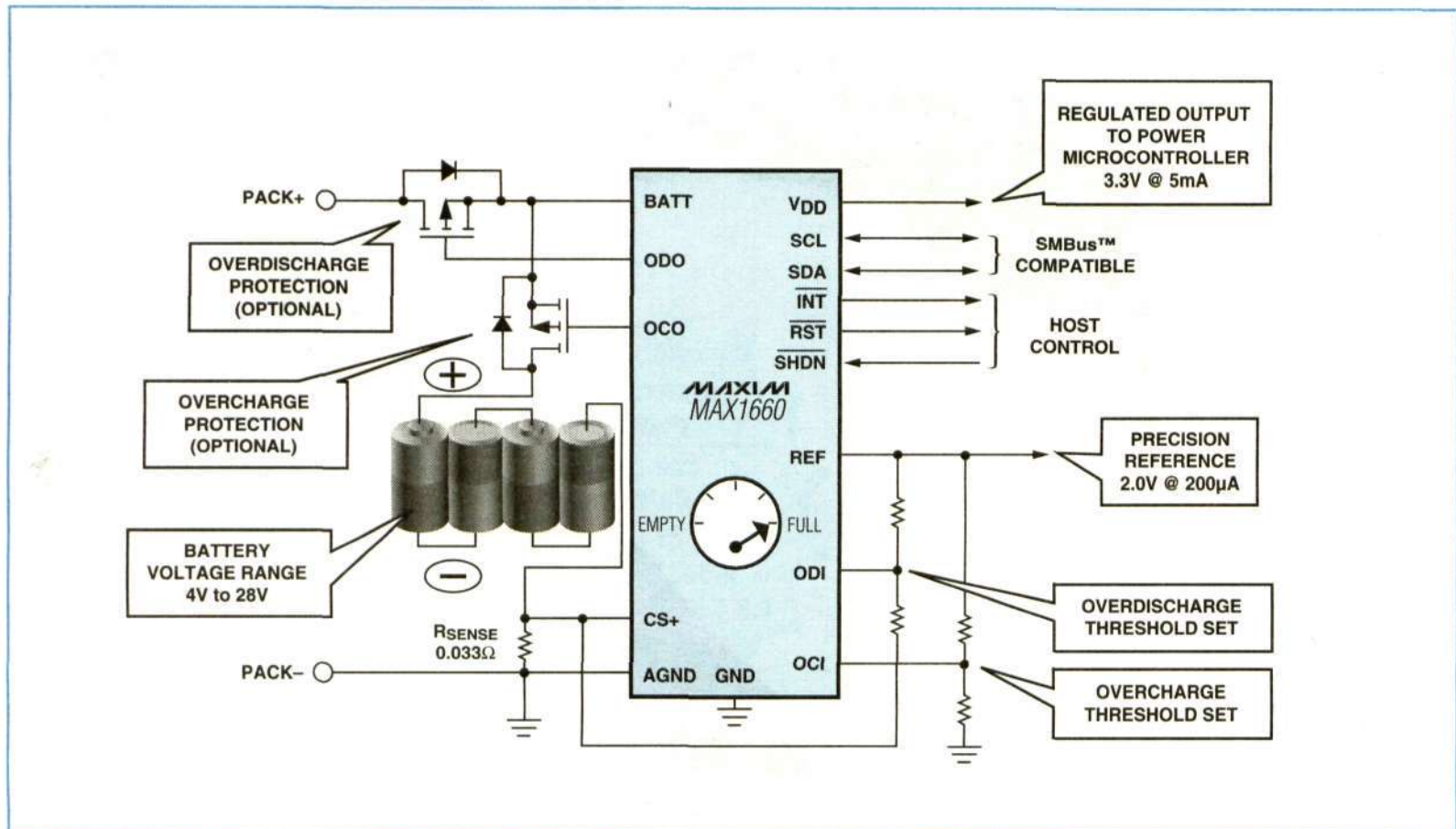
In anticipation of the year 2000, thousands of customers have been offered advantageous status controls for the MD110 company exchange as well as any eventual upgrades that are necessary. That campaign has been very successful. Currently, about 80 percent of exchanges have been upgraded to the most recent Y2K compliant version.

Thord Andersson

thord.andersson@ebc.ericsson.se

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New shop stops competitors

It will now be easier for customers to purchase radio filters and other base-station components. Ericsson Radio Access recently launched sales operations under the name of the Filter Shop. This makes purchasing more convenient for customers, while guarding the market from future competitors.

Base-station accessories for all systems are developed and marketed here. Radio filters that filter out disturbances from radio signals and filters that combine incoming and outgoing base-station signals are the major products.

Other major products are "combiners" that combine outgoing base-station signals, and products for passive indoor systems that combine incoming and outgoing signals.

Custom products

The Filter Shop sells both standard products and products tailored to individual customer requirements. Otherwise, Ericsson Radio Access usually sells complete subsystems for base stations.

"We chose the name 'Filter Shop' so customers would understand that they need not purchase the whole system from Ericsson," says Patrik Sivermalm, product manager at Radio Coverage Products.

System accessories such as filters are sold in a highly competitive market.

"However, we are extremely com-

petitive," Patrik Sivermalm explains. "Our strength lies in our extensive experience in filters and in our wide product range. Also, we have the ability to mass-produce. Our organization is flexible and our products are compatible with all mobile systems."

Filters are among the simpler products for mobile telephony. In fact, many system manufacturers started out making filters and similar system accessories, progressed to subsystems and then to entire radio base stations. It is, therefore, essential that Ericsson remains competitive, to keep presumptive competitors at bay.

Various solutions

The Filter Shop offers products for various solutions - for example, equipment that permits one antenna to be used for several functions. This reduces installation and antenna-leasing costs. It also thins out the forest of antennas covering the rooftops.

There are also filters that stop dif-

ferent frequencies from interfering with each other. For example, today, AMPS and GSM systems are frequently installed parallel, a situation which was not foreseen when the frequency bands were assigned. The systems can, in fact, interfere with each other.

Fast and flexible

"Most of the products we deal with are standard products, which are widely available. What we want to show is that they can be adapted for individual customers. Ericsson is not only a huge company that sells complete systems. As the Filter Shop demonstrates, we can also be fast and flexible," says Patrik Sivermalm.

The aim is to provide the customer with a prototype within ten days, and deliver a series within a few weeks. It is already possible to order filters via the Web or by contacting the help desk to obtain advice from filter experts.

"We are competing with small, fast companies. If we cannot resolve the customer's problems in time, others will," Patrik Sivermalm says.

Lars Malmström

<http://www.rsa.ericsson.se>



Ericsson has now made it easier for customers to purchase filters and other base-station peripheral equipment. The new operations, part of Ericsson Radio Access, are known as the "Filter Shop."

Photo: Björn Lanner



Ukraine is struggling with major economic problems in the wake of the collapse of the Soviet Union. The telephone network leaves much to be desired, but optimism prevails.

Photo: Mia Widell Örnung

Optimism at Optima

Motti Korf is the chairman of the fastest growing Ukrainian operator, Optima. An orthodox Jew from Miami Beach, Florida, in the U.S., he is perhaps not the person you might expect to meet in such a position. He is young, soft-spoken and likes to joke. He first went to Ukraine as a participant in a humanitarian aid project.

Having becoming active on a number of business fronts in the early nineties, the general state of Ukrainian telecoms made it inevitable that Motti Korf would address this market.

Summing up Ukrainian telecoms back then, Korf wryly describes the situation: "You had to wait three days for a long distance phone call and even then sometimes you got disconnected after thirty seconds and the operator said 'sorry your phone call is over.' And then you had to wait another three days!"

Saw opportunities

It was obvious to him that there was a profitable niche in the market, so when the opportunity came up to develop a Digital Overlay Network in the Dnepropetrovsk Region of Ukraine, Korf jumped at it. Today, Optima is the fast-growing second largest operator of public telephone services in Ukraine and an Ericsson customer.

When Optima began operating in April 1996, it cooperated with Lucent, but then switched and today "works almost exclusively with Ericsson." Optima has over 45,000 customers for its sophisticated digital services and is a key player in the Dnepropetrovsk market. From an original 10,000 lines, the installed base will grow to 50,000 by the end of this year.

Korf recognizes the many serious macro-economic questions facing Ukraine, such as the recent knock-

on effects of the Russian crisis, not to mention rebuilding an independent economy following the break-up of the Soviet system. Nonetheless, with its population of over 52 million, vast natural resources as well as scientific and technological potential, Korf is firmly optimistic that Ukraine is on the right track.

"People here are smart and they are capable. In time, this country is going to become stronger and stronger," he predicts.

He is adamant that excessive bureaucracy is one of the millstones holding back economic development, and cites effective tax collection in particular as a key to such development. The system relies on voluntary contributions.

Complex tax system

"People are willing to pay taxes but the system is impossibly complex and therefore very few taxes are collected," Korf explains.

The Ukrainian telecoms market is completely deregulated, fragmented and competitive, but telephone density remains low at around 19 percent. Korf believes the short-term will bring much activity, consolidation and development of the industry.



Motti Korf

ERICSSON UKRAINE

A representation office was opened in spring 1995. Since then, the Ericsson presence in Ukraine has grown from four to 52 people. In Ukraine, Ericsson is the largest supplier of mobile telephony equipment and has contracts for both GSM and D-AMPS throughout the country, including assignments for transmission networks. In Ukraine, Ericsson has delivered 2,300 kilometers of fiberoptic cable, as well as business switches, MINI-LINK equipment, AXE 10 stations etc.

"There is a major need to upgrade the existing infrastructure and also a rapid growth in the needs of the people using telephone services. Businesses are becoming a lot more sophisticated."

Optima has been growing at a rate of more than 100 percent a year and the company has big plans. "In 1999, we aim to grow by more than 100 percent. We are putting together a national telecom network and our goal within three to five years is to have over 500,000 lines. We plan to be a serious competitor for the former monopoly operator in the major cities of Ukraine."

In the past, there have been some issues between Optima and Ericsson regarding after-warranty support. "Optima is a service provider. I believe Ericsson is, too. A service provider offers solutions involving finance, maintenance and business development support. That is the type of service provider we want," says Motti Korf pragmatically.

Edwina Hogan

Announcing Three Courses in Sweden

SATELLITE COMMUNICATIONS -SYSTEMS AND APPLICATIONS

Scandic Hotel Opalen, Gothenburg
April 27-29, 1999

This 3-day course covers all aspects of the design, operation and use of satellite networks, with a heavy emphasis on applications. The latter include voice and data networks using Very Small Aperture Terminals (VSATs), mobile satellite services, and advanced broadband capabilities of satellites under development.

WHO SHOULD ATTEND:

This course is intended for practising telecommunications engineers, satellite and earth station designers and manufacturers, professionals in the satellite communications industry (technical, operations and marketing), and major private and governmental users of satellite and terrestrial telecommunications services, domestic and international.

ABOUT THE INSTRUCTOR:

Bruce Elbert, MSEE, MBA

Mr. Elbert, has been involved in the satellite industry for 30 years, the majority in key roles with the spacecraft manufacturing and commercial satellite operations of Hughes.

Course Headlines:

SATELLITE TECHNOLOGY AND SYSTEMS
SATELLITE SYSTEM IMPLEMENTATION
VERY SMALL APERTURE TERMINAL(VSAT) PRINCIPLES
VSAT STAR IMPLEMENTATIONS
VSAT MESH NETWORKS
INTRODUCTION TO MOBILE SATELLITE COMMUNICATIONS
MSS USER SERVICES
THE MOBILE LINK ENVIRONMENT
END-TO-END SYSTEM DESIGN - WORKSHOP
BROADBAND AND MULTIMEDIA SYSTEMS

Additional Information for "Satellite Communications and Advanced Digital Communications":

Course fee: SEK 14,200 per course (appr. 1,775 USD) including documentation and meals.

The fee will be invoiced in advance by STF. VAT will be added for Swedish participants.

Discounts: Registration on both courses or two or more delegates from the same company receives 10% discount

Registration and further info can be accrued by: www.stf.se/course99

e-mail: bo@stf.se (Mr Berne Olerius)

Fax: +46-31-16 28 55

Phone: +46-31-16 04 70, Mr Berne Olerius

ADVANCED DIGITAL COMMUNICATIONS -THE SEARCH FOR EFFICIENT SIGNALING METHODS

Stockholm Globe Hotel
June 1-3, 1999

This 3-day course addresses the design and evaluation of digital communication systems, emphasising the areas of advanced technology. In this course the focus is on how to make reasonable design choices based on given requirements. The requirements will drive us toward some candidate systems.

WHO SHOULD ATTEND:

Engineers, programmers, chip designers, and engineering managers involved in the design, planning, implementation, or testing of advanced communication systems. Both young engineers as well as seasoned managers can profit from this structured training program.

ABOUT THE INSTRUCTOR:

Dr. Bernard Sklar. Has over 40 years of experience in technical design and management positions at Republic Aviation Corp., Hughes Aircraft, Litton Industries, and The Aerospace Corporation.

Course Headlines:

DEFINING, DESIGNING, AND EVALUATING SYSTEMS
CONVOLUTIONAL CODING, VITERBI DECODING & TURBO CODES
TRELLIS-CODED MODULATION (TCM)
POWER-EFFICIENT AND BANDWIDTH-EFFICIENT MODULATION
FADING CHANNEL CHARACTERISTICS
MITIGATION OF FADING EFFECTS
CDMA MOBILE TELEPHONY AND GLOBAL SYSTEM FOR MOBILE (GSM) COMMUNICATION
WIDEBAND CDMA FOR UMTS/IMT-2000

PLANNING RADIO-RELAY NETWORKS -WORKSHOP

Grand Hotel, Saltsjöbaden Stockholm
September 20-24, 1999

Radio-Relay transmission is being used more frequently than ever in both public and dedicated telecommunication networks. It is necessary to carefully plan and engineer radio-relay networks, both from a financial and performance point of view. This workshop will give radio-engineers the knowledge and training necessary for a successful design work.

WHO SHOULD ATTEND:

Engineers involved in the design, planning, engineering and implementation of Radio-Relay networks.

ABOUT THE INSTRUCTORS:

Heinz Karl, K&K Engineering Nyköping, is a transmission expert with Radio-Relay Networks as main objective.

Ted Larsson, Ericsson Infocom Stockholm, is responsible for Telecommunication Network Design in a Export Market Unit for Public Networks.

Luts Rabe, Ericsson Radio Systems AB Stockholm, is responsible for solution Marketing and Technical Support in the Middle East and South East Asia.

Course Headlines:

NETWORK PLANNING
SURVEY AND PATH PLANNING
PATH CALCULATIONS
PERFORMANCE AND AVAILABILITY
FREQUENCY PLANNING AND INTERFERENCE CALCULATIONS
GROUPWORK AND DISCUSSIONS

Additional Information for "Planning Radio-Relay Networks":

Course fee: SEK 16 600 per course (appr. 2,075 USD) including documentation. The charges for accommodation, meals and coffee, according to the seminar program i.e., from lunch Day 1 to lunch Day 5, is approx. SEK 8 625 (appr. 1 100 USD)

The registration, accommodation and meals will be invoiced by STF. VAT will be added for Swedish participants.

Registration and further info can be accrued by: www.stf.se/it/3500.htm or www.stf.se/it/1131.htm (in Swedish)

e-mail: abr@stf.se (Miss Anki Brander)

Fax: +46-8-21 29 82/ 21 49 60

Phone: +46-8-613-82-31, Miss Anki Brander



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Speaking Out at CeBIT '99

March 18 – 24, 1999, Hannover, Germany

As part of Ericsson's overall approach to CeBIT '98, a series of 24 lectures will be presented. In addition to visiting the two Ericsson stands at the fair, the targeted audience is also being invited to attend the Corporate Lecture series in the TCM Convention Centre, Room Frankfurt.

The lectures are aimed at illustrating some of the new and exciting developments taking place in the world of telecommunications and what Ericsson has to offer to meet these challenges. Each lecture is 30 minutes long, is free of charge and is held in English with simultaneous German translation. The comprehensive programme is designed to encourage the audience to select and attend the lectures that interest them most.

Further information about the lectures will be available on <http://inside.ericsson.se/cebit> and <http://www.ericsson.com/cebit>.

You can also contact Annelie Hellström, project leader for the Ericsson Corporate Lectures at CeBIT'99. Email: annelie.hellstrom@lme.ericsson.se. Phone: +46 8 719 5563 (ECN 850 95563). Fax: +46 8 719 0880 (ECN 850 90880).

Friday March 19th, 1999

10.00-10.30	The New Telecoms World – a definition of where the market is heading	Torbjörn Nilsson
10.40-11.10	New Telecoms and the packet impact	Michael Thurk
11.20-11.50	UMTS Business and Services – a new machine for new business or just another mobile telephony system?	Gunnar Blockmar
12.00-12.30	Convergence, from a technical, business and end user perspective	Laura Howard
12.40-13.10	UMTS Service Creation – how services are created in 3G networks	Håkan Ihrfors
13.20-13.50	The race for higher speeds with GSM Datacom has just begun	Jonas Skiöldebrand
14.00-14.30	GSM on the Net – the new business alliance	Per Söderström
14.40-15.10	The CyberLab Mission: think like an entrepreneur	Donna Campbell

15.20-15.50	A future mobile world – what will it bring us and how?	Joakim Nelson
16.00-16.30	Bluetooth – a new dimension in wireless communication	Per-Erik Svensson
16.40-17.10	The power of WAP beyond micro-browsing	Mikael Jönsson
17.20-17.50	Universal Access – the right to communicate	Ron Johnston

Monday March 22nd

10.00-10.30	Work is a process not a place	Lars Priebe
10.40-11.10	The Call Center in Cyberspace	Lars Irenius
11.20-11.50	Voice, IP and your business	David Wells
12.00-12.30	Why isn't the Internet as reliable as the telephone system?	Bo Lindemark
12.40-13.10	Business opportunities with converged IN and Internet services	Mats Eriksson, Sara Bern
13.20-13.50	The GSM evolution to the future – from HSCSD and GPRS to EDGE and WCDMA	Jonas Näslund
14.00-14.30	Interactive Messaging – a new service for a growing market	Gunilla Rydberg, Dave Werezak
14.40-15.10	Ericsson charts wireless Internet for eCommerce: merging the mobile phone with the wallet	Christer Erlandson
15.20-15.50	The e-box: one-plugging the home	Rolf Johansson
16.00-16.30	Building the Next Generation network	Staffan Åstrand
16.40-17.10	The residential end-user – communication needs and inducements	Finn Olsen
17.20-17.50	WBAS – Point-MultiPoint Business Access Solutions for Mobile Operators	Hans Herbertsson

FROM THE PAST



LM Ericsson's headquarters in the Södra Kungstornet as it appeared in the late 1920s.

Ericsson company towered over city

It is no exaggeration to say that the Södra Kungstornet tower block in central Stockholm was, for many years, a unifying symbol for the entire Ericsson company.

The building was designed by architect Ivar Calmänder and was built for LM Ericsson. It was completed at the end of summer 1925.

That was the year that Allmänna Telefonaktiebolaget LM Ericsson moved its headquarters into the building, under the leadership of CEO Karl-Fredrik Wincrantz.

Wincrantz was the driving force behind the construction of the building.

A short time later, the buildings department moved into the Södra Kungstornet, along with the Swedish sales department, which opened a store and showroom on the ground floor. Many older Stockholmers recall that fancy location with its customer-friendly conference room "The Pit". The Pagod restaurant was located on the top floor of the tower and served free lunch to LM Ericsson employees at tables with white tablecloths.

Historic location

The Södra Kungstornet is situated close to the place where Lars Magnus Ericsson opened his workshop in 1876. It was between 1877 and 1880 that he manufactured the first Swedish telephones there.

In 1931, the LM Ericsson Försäljningsaktiebolag

(FÖB) stock corporation was formed, later changing its name to LM Ericsson Telemateriel AB, a company that went through many exciting phases. Over the years, the Ericsson range has included many non-telephone related products.

Not just telephones

During the financial crisis in the early 1930s, LM Ericsson manufactured items such as stainless steel cookware, camping beds and frying pans, which it then sold through FÖB. Radiola radios and Ericorder tape recorders were among the many other well-known products that were sold well into the 1950s at the Ericsson store.

Ericsson operated its store at that location for over 40 years, only replacing it in 1971 with a new Telecenter at a different city center location.

The last employees to work at the old headquarters building, a handful of LM Ericsson Telemateriel AB workers, ended the 48-year long Ericsson era with great fanfare on November 11, 1973, by drinking a round of "funeral beer" in the Södra Kungstornet.

Thord Andersson

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COLUMN



Roger Wilco

In this issue, Contact presents a new guest columnist, who is going to write about technology and the telecom industry. He has considerable knowledge about these and that is why he wishes to maintain a certain amount of anonymity. He calls himself Roger Wilco and will be appearing again during the spring.

My life as Roger Wilco

With a name like mine it's no surprise I went into the radio technology field when I grew up. In fact I can still recall some of the new words I learned from my father while helping him build my first crystal radio set, especially during the part where I almost electrocuted him with the soldering iron.

A few weeks later when I could sit down again, I would listen to the five radio stations of the day - on which the Beatles seemed to be everywhere. Although it could equally have been my primitive headphones that made all groups sound like the Beatles and all announcers sound like Ringo Starr with tonsillitis.

No magic anymore

Nowadays the magic of radio is widespread through the mobile telephones seen on every street corner, bus and restaurant - usually at the next table during your attempt at quiet conversation. However it must also be said that this kind of interruption can sometimes be a blessing in disguise. My colleague Furrby, who allegedly is no blood relation but is in many ways similar to the children's toy that repeats everything it hears, shared his recent brush with fate with me.

The hapless fellow had heard through the office grapevine that our boss held a strong opinion about the recently-concluded Jones deal that had been Furrby's pet project. Thinking that a salary raise awaited, and with dreams of a winter holiday in the Caribbean dancing in his head, Furrby invited the boss to a nearby trendy bistro for lunch so that they could more freely discuss his future over a bowl of overpriced pasta. Unfortunately, some of Furrby's more creative business decisions on the Jones deal were viewed rather less charitably by the big guy - who proceeded to inform him accordingly. Realising that matters were taking an unpleasant turn, Furrby used radio technology to pre-empt the punch line.

Started to mumble

He suddenly sat bolt upright in mid-conversation with that stunned expression on his face known colloquially as the "deer caught in the headlights" look. He waited a few seconds and then started urgently clutching at his chest and fumbling around the inside of his jacket while mumbling a series of incoherent syllables.

After his initial surprise, the boss began to think that the poor soul was having a heart attack caused by the stress of his job and the brutally frank conversation about his most recent foul-up.

Finally, just when it looked as if he were about to fall face-first into his fettuccine della casa, Furrby produced a mobile telephone instead of angina pills from the inside pocket of his ill-tailored jacket. "Sorry," he said, "Had it set on vibrate. Didn't want to miss that call from the secretary-general." He then excused himself to a quiet corner and pretended to have an important telephone conversation. Of course the boss didn't need to know that Furrby's phone doesn't have a silent alert feature, nor that the only secretary-general Furrby has ever met is the head of the local Flower Arrangement Society.

Committed employee

But this period away from the table gave the by now guilt-ridden boss a chance to reflect on what a dedicated worker Furrby was despite the delicate health that seemed to fail him so often on summer Friday afternoons. Anyway, perhaps it was actually Accounting's fault that the figures on the Jones deal looked so bad.

And in any case, he reflected, was it wise to raise the ire of a man gifted with Furrby's remarkable recall of the content of certain conversations he had overheard at last year's office party? By the time Furrby returned to the table after his "important" call the boss was



wreathed in apologetic smiles and couldn't wait to award the raise that he so obviously deserved. Thus the magic of radio communication had performed another miracle.

Give me a miracle

Meanwhile it will take yet another miracle for me to be able to make sense out of the Jones account that the boss lumbered me with to wrap up while Furrby is away sunning himself in Jamaica. I swear some of these inexplicable figures must have been produced by a complete imbecile. Which reminds me, I think I'll call Furrby and ask him a few questions. Wait, there's no answer - it must be that he switches his phone off when he wants time to himself. Smart fellow that Furrby.

Roger Wilco

Roger Wilco, over and out. In real life, Roger Wilco is a technology manager at a large international telecommunications company that he'd prefer not to identify.

Outlook on everybody's lips

Recently, employee interest in Outlook has exploded. The number of questions about the program received by the EDT e-mail team in Älvsjö (Stockholm) is three times what it was at Christmas.

"Some were hesitant at first. But since November last year, we have actually not had any complaints. On the contrary, people are calling us to ask when they will receive Outlook," says Linda Knutsson of the e-mail support team.

The e-mail support team deals with the questions that local and global help desks cannot answer.

"The demand for information is enormous. There is no time for us to circulate instructions first. So, we put up a web page that contains the answers to the most common questions," says Sofia Johansson.

During the autumn the system was down several times.

"Such failures are not due to the Exchange system itself. We have expanded very quickly, and that has caused the disruptions in the system. We have installed new servers every weekend, and it takes time to resolve initial teething problems," says Maria Hörnblad, operating manager for Exchange.

Interruptions may continue a while longer.

"We are in the midst of an extremely demanding period, where half of our users have Outlook and the other half have Memo. Traffic between the two systems is awkward and can involve delays for the user. However, the system should become increasingly simple and reliable," says Maria Hörnblad.

The software has been distributed to 36,000 employees. The plan is to have 80,000 people on Outlook before the summer, at which point Memo could be phased out.

The e-mail team at Älvsjö is setting up 40 Outlook accounts per day, which is twice its pre-Christmas rate.

"I believe that as more and more employees gain access to Outlook, their appreciation of its advantages will increase – it is so much more than just an e-mail program," says Michael Öman.

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



Paris, Lynchburg or Stockholm – location makes no difference. You can check your e-mail easily from any Ericsson office in the world, without using your own computer. Borrow a colleague's computer and follow Contact's instructions here below. Illustration: Syster Diesel

Use the web for e-mail when you're traveling

Outlook gives you easy access to your e-mail, if you are traveling and can access the Ericsson network on the web.

Prerequisite: You have access to a computer that is connected to the global Ericsson network or is equipped with RACOM connection.

The computer should have either Netscape 4.0 or Internet Explorer 4.0 as the web browser.

Proceed as follows: Open the browser and type the address: <http://exchange.ericsson.se>

This takes you to a top page where you can enter your user ID – for example, etxabcd. Follow the instructions that appear.

A box appears, where you enter the name of

your home domain – for example: emd_sel\etxabcd. If you do not know the name of your home domain, you can find it from your own computer. The domain name is shown in the logon box to your corporate LAN.

You then enter your password, which should be the same password you use to access your network.

You can read and send e-mail. You can also

read attachments, if you download and save them to your hard drive first, then open them in the appropriate program – Word if the attachment is a Word document, etc. More about how Outlook works can be found at the following web address: <http://erimail.ericsson.se/>

Mia Widell Örnung

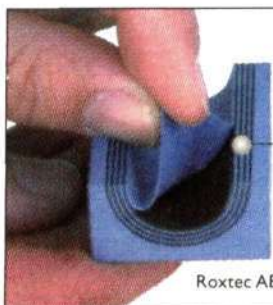
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ROXSYSTEM



ERIC & SON



Dialogue with the British customers

Ericsson in the United Kingdom is gathering its resources to present the company's total range of products and services. At a conference in London in January, the 140 most important British customers received information about Ericsson's vision of the future and the company's total solutions.

"For a long time now, I have wanted to hold an Ericsson-specific telecom conference and exhibition for our customers in London. We finally took the risk and did it, the result being that neither our customers nor myself have any doubt that this will become an annual event," says Nils Grimsö, Ericsson Group Manag-

ing Director U.K., about the first conference held under the name Ericsson Annual Forum.

The theme for this forum was "Visions of the Future." Ericsson's view of the future of the telecom market over the next five years was supplemented by an industry analysis by the consulting company McKinsey.

Jan Wäreby, Ericsson Executive Vice President of Europe, Middle East and Africa, made the opening address, which gave him the opportunity to introduce himself and the new Ericsson organization to British customers.

The U.K. market unit managers then presented practical information about Ericsson's solutions and services in various areas. Mikael Edholm, Ericsson Director of Global Business Development, gave a presentation of the company's scenarios for the future based on "the In-

terconnected World" and the fusion of the telecom and datacom industries.

In addition to the annual customer conference, Ericsson in the UK is implementing a series of activities aimed at British operators, in order to increase their knowledge of Ericsson's solutions. An advertising campaign is already being run using the slogan "Everything Ericsson."

Nils Sundström

nils.sundstrom@lme.ericsson.se

The popular little Cobra

► The Cobra telephone continues to charm, as is clear from the reactions to the article on the Ericofon, alias the Cobra, in the December issue of Contact.

"Where can I find it?" – the commonest question. One way is to comb flea markets and stores that sell modern antiques.

However, prices for models in good condition can be high. The differences between the three main models and the color can be significant, as can be the issue of whether the phone is a genuine Ericsson article or a Televerket copy.

For those who would rather not search high and low, brand new Ericofon are for sale at the Design Museum in London. The price, at GBP 95, is reasonable for this well-made copy. It sports a keypad and is claimed to be compatible with all modern telephone networks.

Available in burgundy and white.

Thord Andersson

thord.andersson@ebc.ericsson.se

Further information can be obtained from the Design Museum, Shad Thames, London SE1 2YD, tel: +44 171 403 69 33.



This Cobra was shown earlier at the Telemuseum in Stockholm.

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Schroff is one of the world's leaders in electronic packaging and electrical enclosures. Combined with excellent system integration capability; we help you maintain a competitive edge in global markets. We are committed to customer service. That's why we manufacture at key locations around the world, to give technical support and common products throughout the world, comprehensive stocking and timely delivery.

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- Leading manufacturer in the field of electronic packaging for more than 25 years
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- Highly competent Engineering capability.
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- Production in 11 factories in 3 continents
- Extensive internal test capabilities
- As a part of the American Industrial Company Pentair Inc we have a significant financial strength.



MORE VALUE FOR YOU

GSM TURNKEY PROJECTS ROME & MILAN

*To enjoy
handling
Europe's most
exciting
business...*

Ericsson Italy, TEI, is the main supplier to two out of three existing mobile operators in Italy, and is well positioned to be the main supplier to the fourth potential operator later this year.

TEI's foremost customer, *Telecom Italia Mobile*, is the biggest mobile operator in Europe with more than 15 million subscribers.

Around 80% of Italian users communicate via our technology.

The Italian mobile market is the fastest growing market in Europe and we're looking for key individuals to work across our longstanding, current and future customer base.

With our HQ in Rome and regional offices all over Italy, there are excellent opportunities to experience one of Europe's most exciting lifestyles, see some of the world's most beautiful scenery and treasures, not to mention working with talented engineers committed to technical excellence.

- AXE Trouble-shooters - BSS, SS, IN
- Cell Planners
- Civil Engineer, site acquisition and build
- BTS Installation and Test Supervisor
- BTS Installation and Test Designer/Engineer
- Network Optimization
- Network Design and System Engineers - Network Dimensioning
- Network Integration Engineers - BSS, SS, IN
- Support Engineers - IN
- AXE Installation and Test Supervisor
- Mini-Link System Engineer
- Project Managers
- Product Managers - BSS, SS, IN
- System Engineers - AXE / Transmission and Access
- Field Support Centre - BSS, SS, IN

Some of these positions will require fluent Italian.

Not so much a contract....more a way of life!....

If you are interested to know more about any of the above assignments, please contact Karen Hogarth, HR Solutions Resourcing Co-ordinator, Tel: +44 1798 874565, Mob: +44 410 587300, email: karenhogarth@cwcom.net

*...you're
going to
have to
handle the
lifestyle*

ERICSSON 

BS FIELD TECHNICIAN

● Main responsibilities: You will be responsible for guided corrective maintenance at replacement of HW at BS by following defined procedures. Tasks to be performed are ordered via Work Order from NO & MC. Requirements: The successful candidate has basic technical education and not less than 2 years of experience from Ericsson GSM radio system.

MENTOR

● Main responsibilities: It will be your responsibility to investigate the training needs of new personnel and candidates. You will establish training plans for each of the individuals in the NO&M organization.

You will also be responsible for allocating the best, available training program for the organization and for guiding all personnel towards best possible skills by means of Structured On the Job Training (SOJT).

Requirements: The successful candidate will have a basic technical education and experience from Ericsson GSM Mobile System as System Engineers, not less than 3-4 years. Experience as teacher or instructor is required. You should also have good knowledge in English and good social- and pedagogical skills. Please, apply in writing with full Curriculum Vitae, containing details of your education, experience, reference and name of your current Manager.

Application: Odette Abiad E-mail: odette.abiad@ericsson.se Memo: erac.eraodab Find CV template att: <http://rtms/jobs/jobs.html>

Ericsson Radio Systems AB, Kista**LOCAL PRODUCT MANAGER - CHINA**

TDMA Systems (BMOA) is one of the fastest growing business units within Ericsson Radio Systems. We are the market leader for cellular telephone systems and services based on TDMA/AMPS standards. Our mobile telephone system, CMS 8800, is the most sold system in the world, and our markets around the world are growing rapidly.

● Are you a person motivated in using your technical support knowledge to assist the Local Company in China, based in Hong Kong? If so, you are a potential candidate for this position. We are looking for a Local Product Manager (LPM) who will work closely with the Customer, the Customer Account managers and the Sales and Marketing people.

As a LPM, you will be expected to perform tasks like: Participate in the promotion process through technical lobbying. Analyze the technical sales support needs of the Local Company, according to the market situation and Customer's technical requirements. Technically assist the sales people in making offers to the Customer. Support the Customer in resolving product related issues. Support the introduction of all suitable ERA processes and methods to the Local Company and the Customer. Support the introduction of all suitable ERA products to the Customer. Do product planning and Product Life management for the market.

The ideal candidate has an engineering degree and three or more years experience in technical support/product management in the cellular industry or equivalent experience. You are fluent in English.

You are self-motivated, ambitious, outgoing and interested in taking the challenge of being a real support to the Local Company and a valuable adviser for the BMOA commercial areas. Could you meet the challenge? If yes, then contact us.

Contact: AM/P Christina Hyllander + 46 8 404 56 69 christina.hyllander@era.ericsson.se AM/P Johan Lembre + 46 8 404 69 06 johan.lembre@era.ericsson.se Application: Ericsson Radio Systems AB AH/H Catrin Düsing 164 80 STOCKHOLM catrin.dusing@era.ericsson.se

Ericsson Caribbean, Puerto Rico**AREA SALES MANAGER ERICSSON PUERTO RICO**

Cellular Systems - American Standards is one of the fastest growing business units within Ericsson Radio Systems. We are the market leaders for cellular telephone systems and services based on American Standards D-AMPS/AMPS. Today, almost 60% of the world's subscribers are served by D-AMPS systems.

● We are now looking for an Area Sales Manager, who is ready to take on the challenge in working with sales and marketing to our customers in the Caribbean region.

You will be involved throughout the whole sales process from initial customer contact, offer preparations to final contract.

The successful candidate will be working in a team of experienced and highly motivated sales and product management people and we can promise you a job that will develop and enhance both your technical and business skills.

You have completed university degree (B.Sc., M.Sc. or similar) in electrical engineering and have at least two years working experience within telecommunications. You have the ability to build excellent relations while driving for results and want to work in a stimulating small team-working environment.

Contact: Mats Skoglund Key Account Manager Phone +1 787 758 1770 Application: Ericsson Caribbean Att: Carmen Nadal Suite 1910, IBM Building 654 Munoz Rivera. Hato Rey, Puerto Rico 00918-4141 carmen.nadal@ericsson.com

Ericsson GmbH, Germany

GPRS is aiming for the combination of data communication and mobility. GPRS is currently standardized as an extension of GSM. EED/D is responsible for the development and maintenance of the GPRS core systems OMS and PXM and for the GPRS applications VLR, SMS and PTM.

QUALITY COORDINATOR

● Quality Assurance- and Process are new territories (Neuland) in GPRS. Only very few processes specified. Project Quality Assurance: verification of quality in projects by analysis of strength and weaknesses of projects. planning of quality assurance activities including improvements. Coordination of QA activities in the projects risk management moderation of inspections. participation in project meetings, milestone reviews, etc. Deployment of improvements into the projects.

Process Engineering: monitoring and evaluation of current practices and processes analysis of strength and weaknesses. improvement and audit of current processes. development and implementation of new processes. organising tool-support for current processes.

As a suitable candidate you are a local employee and have a strong background in SW engineering and relevant experience in working in projects, i.e. should have participated in at least one project. Furthermore, you should have very good communication & co-operation skills. You are service minded and have a deep interest in developing your own competence while working towards a common goal towards the project.

Contact: Human Resources Simon Seebass Dial:02407-575-163 Memo:EED.EEDSIMS or EED/D/Q Stefan Jacobs Dial:02407-575-627 Memo:EED.EEDSJA

GPRS SW DESIGNER, GPRS SWD/199

● Within the PSS organisation, our system house is responsible for SW provisioning, central management, system verification and SW supply.

Our design unit is in charge of several traffic subsystems as well as for the Operation & Maintenance subsystem (OMS/PXM). The latter provides GUIs (graphical user interface) and O&M functions for the new GPRS network nodes (GSNs) and is part of the platform called CORE.

The GUIs are implemented as JAVA applets that are loaded from GSN and executed in a Netscape browser.

The work is organised in small teams with a large degree of responsibility. The product is developed in increments lasting 8 weeks/each. This allows short feedback cycles with the internal customers and shall lead to a stable product.

As a suitable candidate should have experience in Technical: Java / C++ language. CORBA communication principles. UNIX.

Social / General: team working skills. project organization & planning.

For further information please go: <http://www.eed.eed.ericsson.se:8001/packit>

Contact: Human Resources Simon Seebass Dial:02407-575-163 Memo:EED.EEDSIMS or EED/D/GC Andreas Daun Dial:02407-575-418 Memo:EED.EEDAND

Ericsson Spain, S.A.**TWO GSM SUPPORT ENGINEER FOR SPAIN (SS AND BSS SUPPORT ENGINEER) REFERENCE: (COR)**

Ericsson Radio in Spain has established a Regional FSC for a part of Africa in order to give service to our customer in this continent. We are now looking for an SS Support Engineer and BSS Support Engineer within our Support Department. The objective of the job is to provide technical support in the nodes that are operational in the customer network in the different countries. This requires close relationship and interaction with the customer, availability to travel to our customers countries, strong technical background that enables the SS engineer (MSC/HLR) and the BSS (BSS/BTS) engineer to conduct fault analysis, trouble shooting and program correction handling in an efficient manner.

● You will play an active role in providing support and advice to the local engineers and build up the local competence.

Requirements: experience working within Customer Support, a good knowledge of support activities, providing emergency and day to day support, trouble report handling, trouble shooting on/off sites, system upgrade.

You have to have good command of written and spoken English, french knowledge would be appreciated.

ONE UNIT MANAGER FOR PRODUCT MANAGEMENT. REFERENCE: (HANS)

● We are part of the Circuit Switching Systems (PU-CSS) and responsible for the development of GSM Database related products such as HLR,ILR,AUC,EIR,FNR.

We are located in Madrid in modern facilities and close to the Airport. We are working in close relation with Strategic Product Management in Kista and with a number of Local Design Centers all over the world. In Madrid we work also with System Management, Product development and Verification of the products earlier mentioned.

We are looking for a person with experience of Product Management in GSM systems. We think that this person has several years of experience in GSM and in Product management and/or Business development.

We are promoting Team work over the organisation. The organisation is very young and competent but will need someone with more experience to enhance this organisation to a high performing team. Examples of working areas will be evolving of existing products and services to UMTS and development of plans for the future. Be part of 3 party contract deals and talking to local operators to enhance the knowledge about the usage of our products for later inclusion in development plans.

We think you have a marketing, business or telecommunication engineers degree. You can work in a multicultural environment and are used to move fast when needed. Experience from tenders for GSM, good contacts within the GSM world is important.

English fluently speaking and writing a must, Spanish would be a plus but not necessary.

We can offer a 2 year contract in sunny Spain. Please write the references in the applications.

Irene Guld be a plus but not necessary.

Iticultural environmEricsson US.

AXE and OSS Troubleshooters needed in U.S.A., Totowa, New Jersey, 15 minutes from New York City.

AXE TROUBLESHOOTERS

● We are currently seeking qualified engineers who can support GSM CMS40 for our two customers located on the East Coast of the U.S.A., Omnipoint and Sprint. The qualified candidate should already be working in a customer support organization or verification department. The candidate should possess an in depth knowledge of Troubleshooting AXE problems using Test System, Plexview, and knowledge of ASA

code. In addition, knowledge of how to use MHS and MSS is desired. We are looking for immediate short term resources, 6 months, and long term resources throughout the beginning of 1999. The area of expertise for AXE Troubleshooters are in MSC and BSC.

OSS TROUBLESHOOTERS

● We are currently looking for two OSS troubleshooters. They must already be working in a OSS support role, or in Design. The successful candidate should possess in depth UNIX knowledge, and be familiar with Sybase. Candidates with BGW, SOG or SMAS experience will be considered.

This is an excellent opportunity for professional, personal and cultural enrichment. Travel, on rotational call and team spirit are a requirement.

Contact: Customer Care Manager, David DiMenichi at +1 973 890 3596 or Memo EUS.EUSDDI or Resource Recruiter, Heather Nordin at +1 770 565 6991 or Memo EUS.QUSHENO

Ericsson Caribbean, San Juan, Puerto Rico**OSS TECHNICAL ASSISTANT SPECIALIST**

Job description We are looking for an "OSS System Expert" to work with OSS implementation and maintenance support for Puerto Rico, Jamaica, Grand Cayman and other Caribbean customers soon to follow. To qualify, you must have worked with installation/support of OSS systems for at least 2 years and have a broad knowledge of Unix HW & SW, Sybase Administration, X.25, TCP/IP, TMOS platform and CMS8800 OSS Applications, System Administration and troubleshooting.

Requirements: Will be part of the support team in our FSC handling OSS matters, having as main responsibilities to participate in the on-call schedule to handle Emergency Situations, Implementation of new releases and corrections, and Trouble Report Handling. Person should be self-motivated and work easily with minimal supervision as well as within a team to achieve goals and customer requirements.

Good knowledge of English is a must, Spanish knowledge will be appreciated.

Initial contract: 1 yr. Expat (negotiable for 2 yrs.) Excellent benefits.

Contact latest 990228: Jerry L. Barrera, Director, Caribbean FSC jerry.barrera@ericsson.com

INTERNATIONAL EXPOSURE CELLULAR CONSULTANT CAREER OPPORTUNITIES**REGIONAL SERVICES SUPPLY CENTER Latin America**

We are currently strengthening our consultant services in the area of design and optimization for TDMA cellular networks. Our office is located at São Paulo, Brazil.

We are looking for professionals with extensive experience in the RF, switching (AXE) or access networking fields

THE CANDIDATE

- University degree in engineering or related subject
- Fluent in English. Spanish desired
- Strong human and communication skills
- Creative, flexible and strong on initiative
- A team player, interested in sharing knowledge and contributing to the overall success of the group
- Extensive relevant experience in one of the related areas
- International and leadership experience is a plus
- Available to travel

THE POSITIONS**SWITCH NETWORK IMPROVEMENT RADIO NETWORK DESIGN ACCESS (TRANSMISSION) NETWORK DESIGN RADIO NETWORK OPTIMIZATION**

- Help continue building our knowledge and reputation as a service provider
- Deliver network design and network performance improvement consultancy services, mainly to customers in Latin America
- Hold presentations and communicate with all levels at the customer's
- Technical sales support for systems and services

Résumé with current salary and cover letter to:

André Kraemer +55 11 62810203
Patrik Melander +55 11 62815092
e-mail: work.latinamerica@ericsson.com



The owner of this desk is probably an unpretentious person, who is prone to hysterical outbursts. This person is driven by the need to work. What does your desk reveal about you? Foto: Lars Åström

Your desk gives you away

Our desks reveal - albeit inadvertently - a great deal about our personalities. This, at least, is the view of Donna Dawson, a British psychologist who has studied more than 500 desks in various workplaces on behalf of the headhunting company, Adecco Alfred Marks.

According to the British psychologist Donna Dawson, there are six main types of desktops:

1. The super-organized desktop, which is covered with various pieces of office equipment, but is always perfectly tidy.

The owner: commonly an employee in a middle-management position, who feels unappreciated and lonely.

2. The organized chaos desk, where the desktop is drowning in crumpled cigarette packets, coffee cups and paper.

The owner: a person with a tendency toward hysterical outbursts, but who is a good lateral thinker and driven by the need to work.

Lateral thinking can be described as the attempt to see things from a

new perspective by making deliberate leaps of logic.

3. The creative chaos desk, where the desktop is covered with books, drawings, articles and notes.

The owner: mostly a creative, unpretentious person, who is always active.

4. The "extension-of-my-personality" desk, the top of which is laden with photographs and personal belongings.

The owner: may sometimes be very unsure of him/herself and needs constant gratification.

This kind of desk is also an indication of a person who may be very indiscreet.

5. The exhibition desk has the function of an object at an exhibition, with

a large surface devoid of any revealing personal belongings.

The owner: someone who is often a good judge of character and who may have management potential. But people with a desk like this often obscure their own personalities behind a façade of false cordiality.

6. The trophy desk, where each object is positioned for maximum effect and surrounded by framed certificates or other proof of professional success.

The owner: Not uncommonly a natural team leader, who is ambitious management material. However, people like this may become sulky if they feel that their talents are being ignored, and they are prone to outbursts.

Source: The Sunday Times

Footnote: This article was previously published in the Swedish magazine, Arbetsmiljö.



UPCOMING

Tuesday, March 3: Annual Report for 1998 published. Contact will follow this up with a financial supplement in mid-March.

Thursday, March 18 and 24: CeBIT Trade Fair in Hanover, Germany. One of the world's largest IT and Telecom fairs. Ericsson will have two large stands to show Ericsson products and innovations. Contact will be there.

UPDATES

Ericsson received an expansion order for a GSM-system in Turkey worth SEK 4 billion. It is one of Ericsson's largest ever orders for a mobile system.

The CTIA Wireless trade fair in New Orleans, U.S.A., concluded February 10. Ericsson presented products that included the TDMA-Pro.

A roaming agreement between the North American GSM-alliance and the global consortium for TDMA has been signed. The agreement covers 225 million subscribers.

NEW ASSIGNMENTS

Lena Larsson has been appointed president of Ericsson Infotech AB. She is leaving her position as manager of Network Interworking Products at Infotech. Lena Larsson's new position will be effective March 8.

Göran Alfhorn has been appointed manager for technical coordination and development within the Corporate Networks segment.

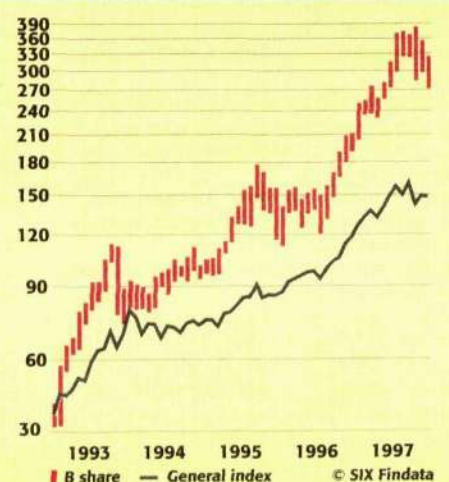
Ken Meyers has been appointed personnel manager at Ericsson in the U.S. He succeeds **Teresa Pippin**, who is leaving Ericsson.

Bo Carlgren has been appointed manager of the Professional Services business unit, which is part of the Operators segment.

THE ERICSSON B SHARE



An Extraordinary General Meeting of shareholders on September 9, 1997, approved a proposed convertible debenture program. The conversion period extends through June 30, 2003. For additional information, access the web site: <http://inside.ericsson.se/converti.htm>



contact

special

Time
to
move on



– manual for the new Ericsson

in a new world

THE LAST YEAR of the twentieth century is not the end of an era – it marks a new beginning, a flying start into life in a new world for those of us who work at Ericsson. It is The New Telecom World that is now demanding all our attention. Towards the end of 1998, there were increasingly hectic efforts to install as much as possible of the new Ericsson organization before the new year.

Formally, the new organization has been in operation since January 1. "Business areas are dead! Long live business segments!" someone may cry, in the belief that it is really only the names of these organizational units that have changed. Nothing could be more wrong! The new telecom world demands much more of us than the mere changing of a few names. There is, instead, a new culture that must be created quickly. We must learn new ways. And we must learn to get along with one another, with our customers and with other associates in a completely new fashion.

This special Contact supplement is about all of this – how we should think and act within the new Ericsson. We want to shed more light on what life will be like in The New Telecom World. We want to demonstrate some examples of how we will now have to work smarter, quicker and with an even stronger customer focus. Time is of the essence, if we are to change our behavior and thinking. Every Ericsson employee must start now. The competition is breathing down our necks. Those who are not quick or smart enough will soon be left behind!

On pages 4–7, we invite you to visit The New Telecom World, or at least a world that is already filled with the ideas and behavior that Ericsson must now adopt. Many of the companies that will be our future competitors are located in Silicon Valley and it will be useful to know what their corporate culture is like.

I hope that this little "manual for the new Ericsson" will help you step up your pace or perhaps opt for a smarter approach if speed is not your strong side. Let's remember, after all, that slow and steady sometimes wins the race!

Lars-Göran Hedén

lars-goran.hedin@lme.ericsson.se

contact special

Supplement to Contact, February 1999
 Publisher: Lars A. Ståhlberg.

Editor:

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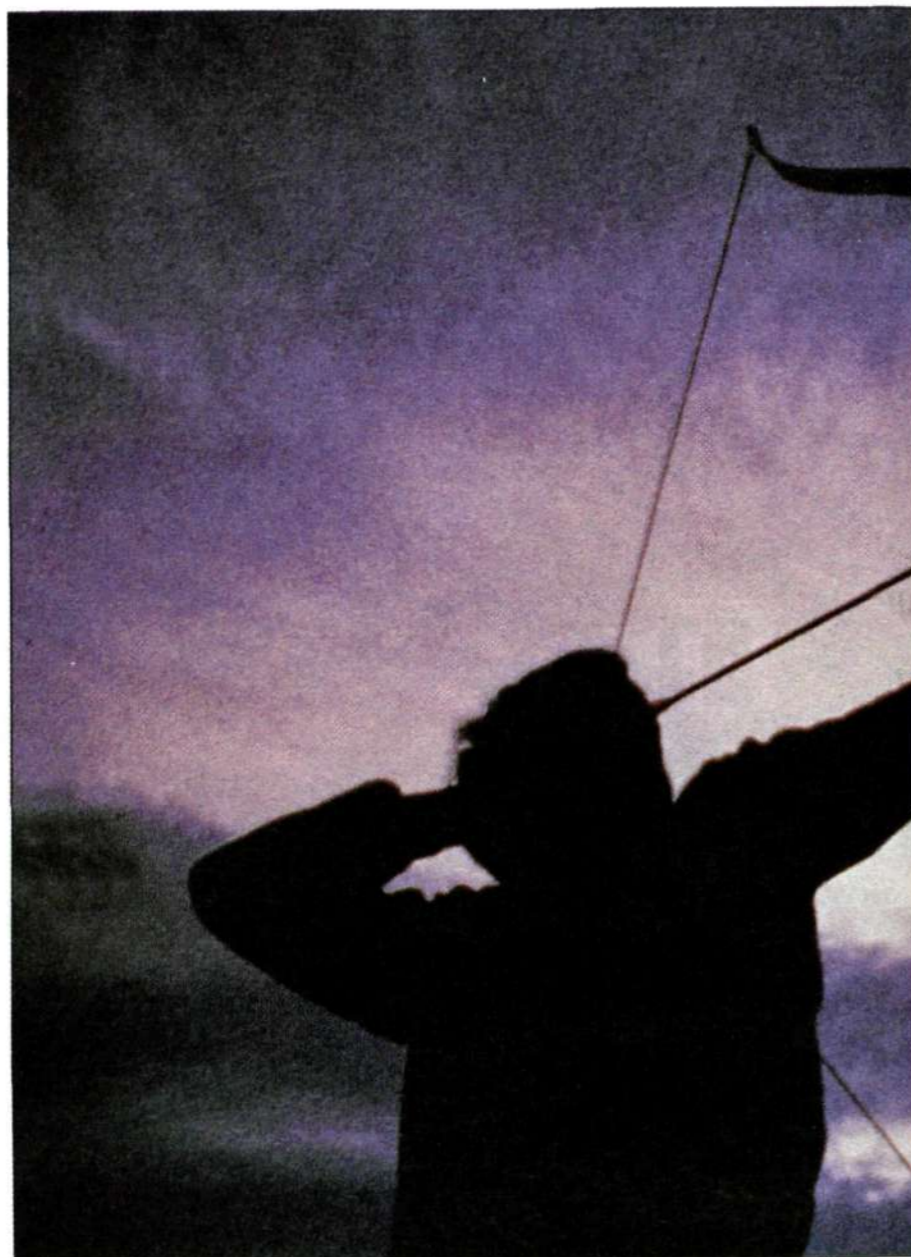
Cover photo: Karin Alfredsson

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 +46 8-665 80 72.

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 Örebro 1999.

On the threshold of the new century, a new Ericsson is beginning to appear.

As usual, it is the individuals in the company who provide the strongest impulse for the necessary changes. The company's personnel policy is now aimed more than ever at providing support for further refinement of the human capital within the company. A series of projects have been started to create new tools for change.



Ericsson aims high in The New Telecoms World. In order to achieve the desired position we need to change attitudes and behaviour in all employees. A first goal is to find powerful driving forces for personal development.

Photo: Pressens Bild

Sights set on individual targets

WELCOME TO The New Telecoms World – the exciting new action plan for Ericsson that was introduced by Sven-Christer Nilsson at the managers' meeting in San Diego last autumn. Since then, much has been said and written about this world – about the new challenges and opportunities that await us on the threshold of the new millennium.

"Now I want all of us who work for the company to shift our focus from the organization to the personnel – we now have to take seriously the consequences of The New Telecom World for all of us as individuals," says Britt Reigo.

As head of Human Resources and one of the 14 members of the new corporate executive team, Britt has responsibility for human resources and organizational matters. For the last six months, Britt and her colleagues have been working under great pressure to install new systems and aids to ease the cultural change now facing Ericsson.

This is a change that will affect all employees, as will the need for changes in behavior and attitudes.

AT THE MANAGERS' MEETING in San Diego in October 1998, a series of new initiatives were presented in the area of human resources. These are initiatives that will support a necessary change in the management of Ericsson, provide employees with guidance for their individual change process, and improve the recruitment of top managers, management planning and individual skills development at all levels. Following the San Diego meeting, one of the ideas that attracted particular attention was the way in which future pay incentives will be implemented. In some quarters, a lively debate emerged on this issue, which often focused on the wrong aspects, according to Britt Reigo.

"The most important aspect of the incentive payments idea is the link to the way in which we set up targets for

our employees and follow up the way these targets are fulfilled. Financial compensation is merely a carrot that will help us to move forward more quickly in our constant efforts to become better and more efficient – to continually move in the right direction, so that individual performance really does contribute to improving Ericsson's competitiveness and financial results."



Britt Reigo

"**THAT IS WHY** we have taken this as the starting point for implementing the extended system of incentive payments that will gradually be introduced at Ericsson. We have created a global framework for the way in which incentive payments may be introduced. It will be necessary to apply measurements, formulate goals, per-

form regular and systematic evaluations and the like," Britt Reigo says.

Based on this framework, it is then up to the management in different countries to create a pay policy that suits the individual market. The local policies that are introduced will be in line with the main requirement – that is, that well-functioning systems for the formulation of goals and assessment of performance are in place. These systems should be designed to support the company's financial development.

"**THERE ARE TWO** important reasons why these requirements are so crucial: The link between individual performance and unit or company achievement ensures that incentive payments do not become yet another expense for the company, but instead become a driving force for better results. And, to return to the main objective, individual goals are required to help the individual and the operation in which he

or she is involved to steer the right course," Britt Reigo emphasizes.

Britt Reigo warns against focusing too much on incentive payments. They are merely one component in the total remuneration package provided for the company's employees. Basic salary still constitutes the largest sum in the pay packet and it is also a vital control factor when it comes to making Ericsson a more efficient and competitive company.

"We are now on the way to considerably greater differentiation in levels of pay. A pay structure which will mean greater dividends for those who invest real effort in their work. This is where the managers who decide salaries must take the initiative.

Britt Reigo is of the opinion that Ericsson's managers must show the courage to manage pay issues in a manner that better supports the development of the company and individual employees.

"These days, when inflation in many

countries is around the zero level, it is important to have pay differentials. And it is an important educational task for managers to ensure that their own staff understand why there is now a need for a new way of thinking concerning pay. Pay increases should not be automatic – they should be linked to the way in which people approach their work."

"**NOW WE ARE BACK** to the way in which we behave at work. And to the need to begin thinking and working in new ways. In the new environment in which Ericsson is operating, with greater input from companies with a very different corporate culture to our own, change is a must. Comments are still being heard from various quarters that the new Ericsson we are now creating does not differ so much from the old organization. That this is no great change on our part – new thinking already existed in our unit. Statements like that are dangerous. We should not

lead ourselves astray – everyone who works in The New Telecom World must be prepared for continuous demands for change. And they must be open and sensitive to how each individual can contribute to this change."

Lars-Göran Hedén

lars-goran.hedin@lme.ericsson.se





Welcome to the New Telecoms World! No other place on earth is more associated with the new "IT age" than is the dry, and once rather unfriendly, valley that is bounded by San Francisco to the north and San Jose to the south. The area consists largely of the Santa Clara Valley and the large body of water known as San Francisco Bay. It was a creative journalist who, back in 1971, gave it the name of Silicon Valley. This term is not only the name of a geographic area, but also of a very special culture. The Silicon Valley culture is as strong as it has ever been. You can count on it having a big impact on what we at Ericsson call "The New Telecom World."

Where dreams come true – Silicon Valley

traditional corporate culture

- The bigger the better.
- Markets are territories to be conquered.
- Destroy competitors, leave no wounded.
- Hide your mistakes so that the competition won't be able to see them.
- Teach your employees to be loyal to the company.
- Let these unfortunate souls guess what is going on.
- You shouldn't trust people, especially not employees.
- Success is having many employees and a large budget.

silicon valley culture

- Stay small, but run fast and be quick in the curves.
- Treat customers like business partners.
- Competitors today, but be prepared to work together tomorrow.
- Let the organization learn from your mistakes.
- Organize a company party in the parking lot.
- Always explain why you've made a particular decision.
- Let people work in peace and they'll do things right on their own.
- Success is being satisfied over what you have accomplished.

WHAT WE KNOW as "Silicon Valley culture" was born in 1939 when Hewlett-Packard began operations. Bill Hewlett and Dave Packard did not like the corporate culture of their time. They didn't agree with the idea that it was good business to pay employees as little as possible and to consider them as faceless, expendable cogs in the corporate machinery. Instead, Hewlett and Packard believed that a company would be more productive if its employees were also able to share in the successes. Rather than building a new "corporate machine" they built up a community of individuals who were tied together through mutual respect for each other.

Centralization and bureaucracy were banned. As a result, new leadership styles and ways to run the company were needed. Above all, they sought to develop a corporate culture that valued freedom, initiative and fun over obedience, uniformity and fear.

Hewlett-Packard became a goal-oriented company, where managers created goals and, to a large degree, allowed their employees figure out how they would be reached. This team-oriented approach towards organizing business operations is widely accepted now, but it was revolutionary at the time it was introduced at Hewlett-Packard.

The success Hewlett-Packard expe-



A drive through Silicon Valley provides an interesting look into how strong the forces are behind the development which has occurred in the computer industry in the past 20 years. Most successful computer companies are located here, many in lavish headquarters. And almost all of them have their roots here in this valley, which extends south from San Francisco.

Photo: Lars-Göran Hedin



rienced confirmed that this new corporate culture was also good for business, and it did not take long before it became widespread. It is, of course, most deeply rooted in Silicon Valley. Cisco, Qualcomm and Bay Networks (now Nortel) are just a few examples of competitors who cannot be fully understood without insights into the Silicon Valley culture. It is companies such as these, which are permeated with this corporate culture, that Ericsson is now facing in the battle for the converging data and telecom markets.

Geoffrey James, in his interesting book "Success Secrets from Silicon Valley," outlines eight areas that summarize this new culture and shows how

these areas differ from their counterparts in traditional corporate culture:

TRADITIONAL

1. Market = battlefield

Business operations consist of a series of conflicts between companies in the marketplace, departments within a company, various groups within an organization, individuals within the group, or (in the long run) even between customer and supplier.

Managers build empires with armies of employees who fight the battles after receiving marching orders from management.

Competitors are the enemy. Women, who are not considered to be good war-

riors, are unsuitable for higher positions.

2. Company = machine

Employees are cogs in the machinery. Nobody is irreplaceable. Individual initiatives, goals and desires are subordinate to the requirements of the machine. Managers create highly controlled groups with strict divisions of roles and functions. Both employees and managers are convinced that change is very difficult. Top-down management rules.

3. Manager = controller

The most important job of managers is to control how their employees conduct themselves. Employees who dis-

agree are saboteurs. Various power structures attempt to control the company, creating a highly charged atmosphere which is laden with internal political conflicts. Individual initiative is thwarted

(cont. →)



(→ cont.)

while waiting to see "what the boss says."

4. Employees = children

Employees are too immature and stupid to be entrusted with real responsibility. Strict rules are required to keep them in place. A deep division exists between employees and management. No employee does anything unless he/she is sure that they will not be blamed if something goes wrong.

5. Motivation = fear

Employees work because they are afraid of losing their jobs. Nobody dares to make risky decisions or attempt drastic measures.

6. Change = pain

It is complicated and difficult to change the company, something that only desperate companies devote time to. Attempts at reorganization and making things more efficient fail or are torpedoed by people within the organization who are attempting to avoid painful changes.

7. Computers = rulers

Technical aids are designed to facilitate management's control over the rest of the company. Employees are impersonal extensions of computer systems. It is the computers that control things,

with the result that employees fail to become their friends.

8. Work = difficult

Work is, by its very nature, something that is completely separated from the rest of life. A necessary evil that intrudes on free time. It is difficult to go to work.

SILICON VALLEY

1. Market = ecosystem

The business world is built around groups who exploit the market in symbiosis with each other. The company that can best adapt itself to the needs of the market will be most likely to succeed. Companies follow changes in the market, tend to hire people with different kinds of complementary skills and willingly participate in interesting partnerships with other companies.

2. Company = community

A company is a collection of individuals, each of whose ambitions and dreams are closely connected to the higher goals of the company. Employees work extremely hard so that the company will reach its goals and are truly happy about their own, their colleagues' and the company's successes.

3. Manager = service man

A manager's foremost task is to stake out the direction of travel and gather the resources employees need in order to do

the cradle of many great discoveries

Silicon Valley's contribution to modern civilization cannot be overstated. It is from here that many of the innovations which have changed our lives have come.

High voltage, long distance power transmission, the amplifier tube, the first radio broadcast, the klystron tube (which paved the way for radar technology), electronic measuring instruments, the electron microscope, silicon substrate for printed board assemblies, programmable handheld calculators, video tapes and video tape players, the modern transistor, linear

the job in the best manner. Management "attends" rather than "runs" the company. As a result, decisions are made at that level in the company where they are most appropriate for the situation. Headquarters gives local groups or units great autonomy in creating their own rules and setting their own goals.

4. Employees = colleagues

Every employee is considered to be the company's most important person. Competency requirements are high, skill development is encouraged – from the loading dock to the board room. Employees take their fate into their own hands. A spirit of friendly competitiveness is generated over who best supports the company's development.

accelerators for particle physics and cancer treatment are but a few examples.

Others include RAM memory for computers, hard disks, integrated circuits, laser technology, microprocessors, LED technology, personal computers, inkjet printers, heat shields for space vehicles and modern gene technology.

These wonders of technology have either first seen the light of day in Silicon Valley or they were significantly improved so that they could achieve a market breakthrough.

5. Motivation = vision

Employees are familiar with the stated goals and receive proper compensation when they are reached. Work is infused with enthusiasm, energy and humor. Many work hard, working long days, because they know they have an economic stake in the success of the company.

6. Change = growth

Changes are positive since they make it possible to follow the market wherever it is going and create new opportunities for success. Both employees and the company itself are open to new ideas and ways of working.

7. Computers = tools

With the help of technology, repetitive, tiring jobs can be automated. The employees thus released can instead devote more energy towards thinking and working creatively as well as building up relations within the business environment.

8. Work = play

It should be fun to work. Management's task is to provide employees with work assignments that really satisfy them. When this is the case, employees gladly stay at work longer since they get along together and enjoy what they're doing.

It is obvious that there are big differences between the culture that has developed in Silicon Valley and what we consider "traditional" corporate culture. Reality is, of course, much more complex than this. Much of what has been exemplified here as traditional corporate culture is, of course, difficult to recognize and feels slightly exaggerated. Still, it should be easy to agree that these comparisons are rather thought-provoking!

Nobody questions the fact that the very special culture that has been created in Silicon Valley gives the companies there great advantages. Even if much of this kind of thinking is widespread around the world today, it is still here, in Silicon Valley, that this culture's roots have grown the deepest.

Lars-Göran Hedén

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Would you like to know more? Read "Success Secrets from Silicon Valley". Geoffrey James, 1996. Times Business.





This is where the history of Silicon Valley began. Stanford University, founded in 1891 by Lelan Stanford, produced the foundation on which many of today's most successful data and datacom companies stand.

Photo: Lars-Göran Hedin

Longer history than you think

I T IS A COMMON misconception that the Silicon Valley success story does not date further back than to the early 1970s, when the valley acquired its current name.

Granted, the area and the culture did not begin to attract attention until about thirty years ago. However, the reason why this area is now one of the world's most overheated employment markets for computer people, why it is home to the world's largest concentration of Nobel laureates and why it ranks as the Mecca of computer technology is to be found further back in its history.

Many people believe Silicon Valley can thank a visionary railroad mogul for its success. In the early 1890s, Lelan Stanford founded a university at Palo Alto, at the time an idyllic country village, where he purchased a vast tract of land. This university differed from most others in that its researchers and scientists began collaborating with neighboring companies at an early stage. In this way, Stanford University came to play a major role in the development of radio technology in the early years of the century.

In 1937, the Varian brothers built the first klystron at Stanford, thereby

laying the foundation for modern radar technology. Two years later, two Stanford students started a company that has been at the leading edge of technological development ever since: Bill Hewlett and Bill Packard. Their company, Hewlett-Packard, also pioneered a new approach to corporate management and introduced a more open style of corporate culture.

TEN YEARS LATER, William Shockley and his colleagues at Bell Labs invented the transistor. Shockley returned to his childhood home of Palo Alto to turn the transistor into a commercial success. Fairchild Semiconductor, founded by Shockley and eight other young scientists, became another of Silicon Valley's successful early companies.

In 1952, IBM opened a laboratory in San Jose and soon thereafter introduced another technological breakthrough – RAM memory. A new product – the hard drive – was born at IBM.

In 1958, defectors from Fairchild created a company destined to become one of the brightest stars in the data firmament: Intel. Intel's huge success is intimately connected to the advent of the personal computer. Naturally, this

nowadays ubiquitous item can also be traced back to Silicon Valley, though not to IBM as many believe.

THE FIRST REAL personal computer was not an IBM PC at all, but an Apple II. In fact, it was Apple's founders, Steve Wozniak and Steve Jobs, who first hatched the idea of building a simple computer for personal use. With the first Macintosh in 1984, they refined the idea further by providing the computer with a mouse, a user-friendly graphic interface with icons and many other features that no modern computer user could imagine living without.

A few miles north of Apple's head office in Cupertino lies a company whose name points directly to its connection to Stanford. "Sun" is in fact the abbreviation of Stanford University Network. Here, in 1982, four young computer scientists created the first modern workstations. After a year, they had 400 employees and net sales of SEK 320 million! The following year, 1984, two other Stanford computer whizzes built the first router to connect different Stanford networks and launched another company. Co-founded by Leonard Bosack, Sandy

Lerner and a few of their friends, this company's name is not unknown in "the new telecom world:" Cisco.

Other successful companies born and raised in the Valley include National Semiconductor (1959), AMD (1969), Oracle (1977), Silicon Graphics (1982), Adobe Systems (1962), Bay Networks (1986) and Netscape (1995).

Lars-Göran Hedin



The pieces are finally in place and employees are hard at work. This chart, previously published in Contact, tries to explain the biggest changes within Ericsson's new organization.

THE NEW ERICSSON consists of two main parts – the product sector and the market sector. This division is aimed at clarifying product responsibility and increasing the customer focus.

Overviews of the new organization can be shown in different ways. Contact's presentation emphasizes Ericsson's product areas. Ericsson's three business segments are divided up according to different customer categories: Consumer Products, Operators and Enterprise Solutions. Within these categories, there are business units and product units which have overall responsibility for Ericsson's selection of products and services.

Ericsson's management consists of 14 people who make up the Corporate Executive Team. All members have clearly defined responsibilities within their business segments, market areas and corporate functions. Responsibility for the daily operation and decision-making is found lower down the organizational hierarchy – among the business units, product units and market units.

In many cases, a local company is the same thing as a market unit. Ericsson in Portugal is, for example, a market unit. All market units belong to one of the four Market Areas. Since every market area has a corporate office in the region, customers are afforded a direct connection to Ericsson's management.

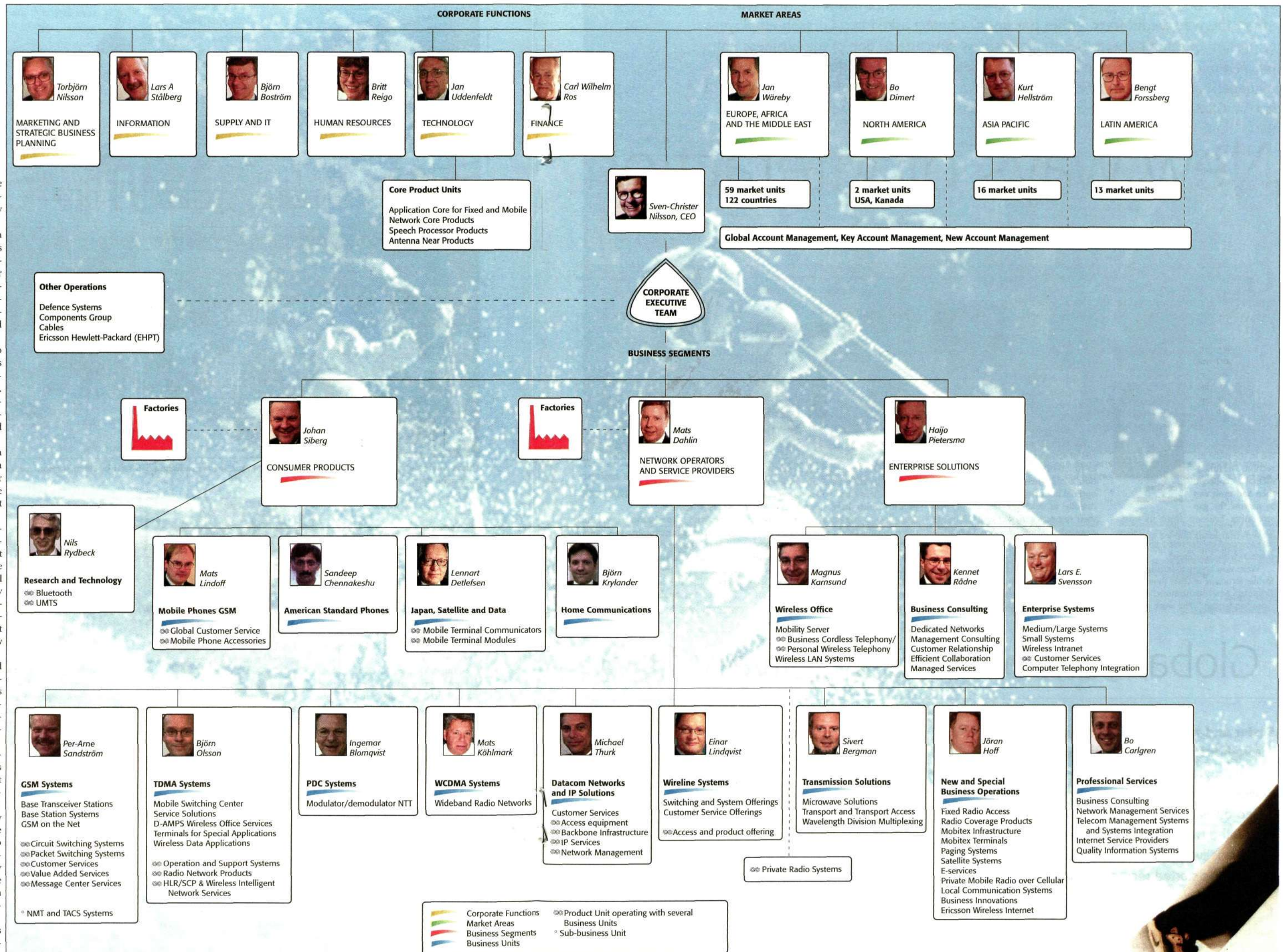
Customer contact is handled through "customer accounts" or through retailers. These contacts are intended to provide the customer with an overview of what Ericsson has to offer. Primary responsibility for the company's 15 largest customers is handled by Global Account Management. Larger customers within every market unit are handled through Key Account Management. The same system applies to the task of finding new business opportunities and the development of customer relations which are taken care of by New Account Management.

Product units in the new organization can be likened to "companies within the company." The responsibility of developing complete product offerings means that product units need to develop, nurture and maintain systems, products and services. There are a number of different design offices to assist them in this regard.

Within the largest business segment, Operators, several product units serve the needs of various business units. This is an essential compromise, brought about by the amalgamation of the computer and telecommunications fields, combined with demands for mobility.

Both the product and the market sides in the new Ericsson organization receive support from Corporate Functions. One responsibility of these functions is to draw up guidelines and strategies. Shared technological developments are controlled by the Technology corporate function. Operational responsibility of the factories and their manufacturing processes is overseen by the Operator and Consumer Products business segments.

A number of other operations, such as Components Group, Cables and Defense Systems lie outside existing business segments and report directly to the Corporate Executive Team.



Research and Technology
 Nils Rydbeck
 Bluetooth
 UMTS

GSM Systems
 Per-Arne Sandström
 Base Transceiver Stations
 Base Station Systems
 GSM on the Net
 Circuit Switching Systems
 Packet Switching Systems
 Customer Services
 Value Added Services
 Message Center Services
 NMT and TACS Systems

TDMA Systems
 Björn Olsson
 Mobile Switching Center
 Service Solutions
 D-AMPS Wireless Office Services
 Terminals for Special Applications
 Wireless Data Applications
 Operation and Support Systems
 Radio Network Products
 HLR/SCP & Wireless Intelligent Network Services

PDC Systems
 Ingemar Blomqvist
 Modulator/demodulator NTT

WCDMA Systems
 Mats Köhlmark
 Wideband Radio Networks

Datacom Networks and IP Solutions
 Michael Thurk
 Customer Services
 Access equipment
 Backbone Infrastructure
 IP Services
 Network Management

Wireline Systems
 Einar Lindqvist
 Switching and System Offerings
 Customer Service Offerings
 Access and product offering

Transmission Solutions
 Sivert Bergman
 Microwave Solutions
 Transport and Transport Access
 Wavelength Division Multiplexing
 Private Radio Systems

New and Special Business Operations
 Jöran Hoff
 Fixed Radio Access
 Radio Coverage Products
 Mobitex Infrastructure
 Mobitex Terminals
 Paging Systems
 Satellite Systems
 E-services
 Private Mobile Radio over Cellular
 Local Communication Systems
 Business Innovations
 Ericsson Wireless Internet

Professional Services
 Bo Carlgren
 Business Consulting
 Network Management Services
 Telecom Management Systems and Systems Integration
 Internet Service Providers
 Quality Information Systems

Legend:
 Corporate Functions (Yellow)
 Market Areas (Green)
 Business Segments (Red)
 Business Units (Blue)
 Product Unit operating with several Business Units (Double circle)
 Sub-business Unit (Single circle)

What are the practical implications of Ericsson's new organization – how will it affect the way we interact within our units? Contact asked two Ericsson employees to present questions about the company's new structure to one of the business unit heads. An interesting conversation followed between Mats Storsten (market manager) and Kurt Sillén (market manager in a product unit), both of whom work for the GSM Systems business unit, and Per-Arne Sandström, head of GSM Systems.

New ways of interaction

GSM SYSTEMS is the largest business unit in Ericsson. To some extent, the organizational structure introduced in the unit two years ago has been a model for certain parts of Ericsson's new organization.

In 1996–1997, the GSM, NMT and TACS business unit, headed then by Per-Arne Sandström, restructured its former market operations unit for Western Europe. About a year later, the entire business unit was restructured in the same direction. The fundamental concept, then and now, was to narrow the gap separating Ericsson from its customers, whereby Ericsson's local companies assumed greater responsibility for contacts with customers.

"We're now trying to harmonize the former structure of GSM Systems with Ericsson's new organization," says Per-Arne Sandström. "The work was con-



Per-Arne Sandström

ducted in a project called Sylvester, which we completed in mid-January."

Mats Storsten: *In the past, the status of Key Account Managers (KAM) and New Account Managers (NAM) differed depending on which local company was involved. How will their roles be strengthened now?*



Mats Storsten

Per-Arne Sandström: Both categories of account managers are intended to function as Ericsson's face in relation to customers and, to support their optimal performance, they now report directly to manager responsible for their respective market units. In most cases, what is now considered a market unit was the same as a local company in the old organization.

I recently worked at an Ericsson company outside Sweden and know from experience how important it is for Key Account Managers and New

Account Managers to maintain direct contact with market unit managers in order to optimally represent Ericsson.

Kurt Sillén: *Will the status of product units be changed by Ericsson's new organizational structure?*



Kurt Sillén

Per-Arne Sandström: In our business unit, the product units already function as independent companies within the company, and their status has been even more accentuated in Ericsson's new organization. This trend will continue. The product units have developed tools that allow customers to order standardized products directly and simply from our production plants. The system has eliminated the need for our market units to maintain control over order processing procedures, and we can already see significant gains from increased efficiency.

Mats Storsten: *What sort of responsibilities will be assigned to persons who handle global customers, so-called Global Account Executives?*

Per-Arne Sandström: Global Account Executives (GAE) monitor the operations of large global customers and report at regular intervals to market area managers. GAEs are supported by the resources provided by product units and business management in Sweden, and also receive considerable support from the market units abroad. Ericsson's market unit in the global customer's home market must provide most of "the muscle" in this type of work.

Kurt Sillén: *How will system solutions be presented?*

Per-Arne Sandström: Product units are responsible for the overall systems offering permitted by the aggregate sum of their products. In addition to this, the business units are responsible for actual applications. The various business units of each segment have to "talk to each other"

Global control makes delivery flow

Faster and more reliable deliveries will be secured through Ericsson's new organization. TTC Global is a new program that will radically improve the entire delivery chain, from order booking to installation. Based on past experience from the mobile telephony sector, the new program provides a good indication of how delivery times can be shortened. A pilot project was started recently in Germany.

SPEED IS A KEY COMPONENT in the new Ericsson, particularly speed in providing customers with supplies of products, services and systems; that is, Time to Customer, or TTC.

"Enormous gains can be derived," says Christer Jungsand, project manager

of the new TTC Global program. "And we need these gains to secure our future survival in the marketplace."

We're talking about the classic improvement goals: higher delivery reliability, shorter lead-times, less capital employed and generally lower expenses. In other words, the same objectives

emphasized in, for example, the World Class Supply (WCS) program previously implemented by the GSM Systems business unit.

The tools used in TTC Global were tried and tested in the WCS program; they are based on simplified order booking and other procedures now being introduced throughout Ericsson. Among other benefits, the program includes completely new methods to utilize and take advantage of the Internet and send equipment in fully tested, complete packets.

One of the general objectives of TTC Global is to eliminate inventories of finished goods stockpiled within local companies. Old inventories of outdated or damaged equipment have long been a financial burden.

"It's meaningless to quote figures in illustrations of how we can improve in

different areas," says Christer Jungsand, "but, in some product segments, the program will generate annual savings reflected in efficiency improvements corresponding to many tenths of a percent."

The background to the new demands imposed on suppliers lies in today's strongly deregulated telecom markets. Telecom operators are forced to show a quick return on their investments, and they no longer have time to learn all about telecom operations. Instead they work at a level that emphasizes properties and capacity rather than numbers of base stations, cables, switching equipment, etc. The customer orders a system for a given number of subscribers and specified services. Subsequently, the supplier is responsible for breaking down customer orders into intricate details.



The new organization is resulting in substantial changes in the interaction between different units within Ericsson. Contact held an interview session with Mats Storsten, Per-Arne Sandström and Kurt Sillén of the GSM Systems business unit to shed greater light on present and future interaction between business and product units.

to arrive at the best solutions. It is the business unit's responsibility to formulate offerings to customers, and their proposals must keep pace with current product development work."

Mats Storsten: How will the new Ericsson organization manage opera-

tions that involve several business units; for example, Fixed Mobile Convergence (FMC)?

Per-Arne Sandström: Since we're now organized in a single segment, I believe we will communicate better with each other than we did in the past. The business units here in Swe-

den will have to work together; at certain times, Wireline Systems will be the driving force and, at others, it could be GSM Systems that leads the way. Support from segment management is important at all times, however. As a conclusion to these interview questions, I would like to emphasize the

importance of understanding our own future in a world characterized by dynamic change. Ericsson's new structure will make it easier for us to adapt successfully to change.

Gunilla Tamm

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a strong competitive weapon

To facilitate optimal handling of today's large volumes, Ericsson has developed an organization around so-called Supply Units that provide customers with well-defined products and assume total responsibility for orders and logistics management. The supply unit in Gävle, which was one of the first to adopt the system, is now one of Ericsson's highest-performance Supply Units. Working with about 500 employees, the Gävle unit ships radio base stations for GSM systems to all parts of the world.

The new supply concept means that a customer or market unit books a complete site-order directly with a Supply Unit, which then provides direct delivery of complete sites for installation. The concept is implemented globally, step by step, at various speeds in different countries.

"The entire concept was tested as ear-

ly as January, however, in the pilot project in Germany," says Lars-Göran Hansson, development manager of the entire supply chain for base stations (Base Transceiver Stations) within GSM.

In this context, the total concept is defined as everything from accurate forecasts to simplified order processing, a few product packages (one or two order lines, as opposed to hundreds in the past), total site-solutions and a "trace and track system" that allows players in the supply chain to monitor all phases of deliveries.

"We cannot ignore the fact that introduction of the concept calls for comprehensive change in the form of rationalization measures in local offices," Lars-Göran Hansson continues. "But the changes are essential for our ability to compete in the future."

"We have conducted tests involving

total site deliveries and the results have been very good," says Kurt Sillén, marketing manager for GSM base stations and site solutions. With the new procedures, whereby customers order their equipment on the basis of operating features, all parties concerned save a great deal of time. And everything is correct and accurate from the start."

"Total Site solutions, combined with our supply machine, and the fact that we can subsequently process all orders electronically over the Internet, while operators maintain continuous contact with their Supply Units, will make Ericsson a World Class Supplier," Kurt Sillén summarizes. "Furthermore, in the near future, when we can also tell customers exactly where their equipment is during every phase of the delivery process, we will become an 'outstanding' supplier, as one of our customers said recently."

"In the past, Nokia was the most cost-efficient company in the industry. Today, however, we have caught up with the Finnish supplier and, maybe, taken the lead," Christer Jungsand concludes.

Lars Cederquist

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From local company to market unit. Naturally, the transition is not a simple process. In mid-1997, when Karl Alsmar was appointed President of Ericsson in Germany, he went to work immediately to create a more customer-oriented structure.

Transition from local company to market unit

WE IMPLEMENTED a major change in the autumn to become faster, more flexible and more innovative – more active in every way, says Karl Alsmar. “We focused on increasing our understanding of the customer’s business concepts and needs, and applied them in communication solutions.”

The process was part of a comprehensive structural change. Personnel were appointed to new positions with total customer responsibility for major clients such as Mannesmann, Deutsche Telekom and Otelo. They are now flexible, spend more time with the customers and are virtually unencumbered by home office administrative duties.

The actual implementation of assignments is coordinated in a joint Customer Services unit that provides all required project and customer support.

ACCORDING TO KARL ALSMAR, it was relatively easy to adjust to Ericsson’s new organization, since many of its concepts had already established a foothold in the German company. Naturally, however, the new structure affects some functions more than others.

“This is particularly true of the strong focus on professional services, an area in which we have now taken several new initiatives,” Karl Alsmar continues.

He believes that organic growth cannot serve as the sole source of business growth. To achieve more rapid expansion, Mr. Alsmar is of the opinion that the company needs to increase its cooperation with pure consulting companies or, alternatively, acquire full or part ownership interests. This strategy closely matches that of the Business Consulting unit of Ericsson’s Enterprise Solutions business segment, for example.

The creation of new business units in Stockholm affects the structure of Ericsson subsidiaries, where mirror-image organizations are being developed. Since November 1, 1998, a new unit has been operating in Germany

with total focus on Internet services.

The unit concentrates on companies that provide Internet services but are not telecom companies. Strong marketing efforts are now being made in this area.

Providers of Internet services within Deutsche Telekom, Otelo and other telecom operators are cultivated by Key Account Managers.

“It’s a good idea to separate what constitutes a market unit from other support functions, for example research and development, and functions now referred to as business support,” Karl Alsmar continues. “We don’t have a ‘supply’ function in the strictest sense of the term, but we do have administrative procedures and everything encompassed within such procedures, from payroll to property management, legal expertise and other responsibilities. We have the potential to generate synergies on a Europe-wide basis, by operating across national frontiers.”

Installation resources can be used more flexibly by several different market units. The same is true of customer support resources; for example, in after-sales support. Money can be made in this area by working on a European basis. The entire range of invoicing procedures can also be concentrated in one place.

Instead of maintaining IS/IT functions in every country, a virtual support company could be established for all of Europe.

“The concept of joint utilization of resources in different countries has already been discussed in the TTC (Time to Customer) flow,” explains Karl Alsmar. “Our company receives assistance in certain areas from the Netherlands and Switzerland.”

SUPPORT FUNCTIONS have to be developed locally to provide customers with the continuous assistance they need, but resources for implementation can be divided among many companies. Italy is already included in the network.

“I believe we must work much more systematically, and the regional level can make important contributions in this respect by stimulating more comprehensive and far-reaching utilization of resources,” continues Karl Alsmar. “Today, most cooperation is restricted to bilateral agreements.”

Consolidated reporting by regions is a new concept in Ericsson’s market units.

“Working with consolidated results is important,” says Karl Alsmar. “The earnings of companies recognized as legal entities is of secondary importance. We are the pioneers of consolidated reporting. The results of separate legal entities are confusing and tend to create discussions about which company should absorb which costs, Stockholm or Düsseldorf. We must remember that it’s always Ericsson’s money.”

The idea that Karl Alsmar, as the head of operations in Germany, would

actively interfere with operations in the Ericsson Eurolab in Aachen, for example, is totally out of the question for him.

“I am Chairman of the Board. First and foremost, it is the responsibility of other Board members to decide which activities should be concentrated there and how the strategy should be formulated.”

Karl Alsmar’s role is to secure Ericsson’s industrial presence in Germany, and to ensure the long-term sustainability of Ericsson’s investments in the German market.

EACH INDIVIDUAL UNIT, the Eurolab, for example, contains several business units with particular interests that have to be monitored. However, they cannot decide themselves how every phase of operations should be conducted at all times.

“An overview from a higher echelon is required in the German operations, and that’s my area of responsibility,” Karl Alsmar explains. “Of course, there are managers who find it difficult to work with a job assignment that does not allow them to say ‘I make the decisions around here.’ I’m not one of those people. Whenever a result is achieved, I know that many people contributed; no single person has a monopoly.”

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Karl Alsmar



Ericsson’s next-door neighbor in Germany is Mannesmann, the company’s largest customer.

Photo:
Thord Andersson

Better focus on the local market.

"For us, what has happened is no revolution. The interesting thing for us is that now, product and business units can handle their own costs so we can focus more on Spain itself. The responsibility for export operations has been shifted to the product units."

That is how Raimo Lindgren, president of Ericsson in Spain, summarizes the difference between the new marketing organization implemented at year-end and the previous situation.



The Spanish winter can be pretty bleak but that doesn't stop the Spaniards from enjoying a midday siesta. Ericsson's Spanish market unit, however, isn't napping. The new organization permits a greater focus on the company's business in this important EU market.

Increased focus on Spain

ERICSSON SPAIN is one of the organization's large local companies. Up to year-end, its status was that of "Major Local Company." Now, that distinction is gone and there are only market units within a market area. The same conditions apply for all.

"The fact that, for Spain, the difference is not that great, is the result of historical circumstances," Raimo Lindgren maintains. "You can't change everything in one fell swoop."

He is both manager of the Spanish marketing unit and president of the local company. In the new organization, the local company is essentially a legal structure within which the market unit is based.

Like the other presidents of former "Major Local Companies," Raimo is also a member of Jan Wäreby's executive team for the Europe, Middle East and Africa market area. Hence, the new situation is not greatly different. In the future, however, the president of the local company and the manager of the marketing unit will not necessarily have to be one and the same person, and the connection to the executive team for the market area will not be so clearly defined. When this structure is

in place, the thinking behind the present organization will become clearer.

In the case of Spain, the customer's national and international operations are interlinked and important decisions are taken in Madrid. It is, therefore, natural that one person should have the overall responsibility vis-à-vis the customer.

The new organization allows for a market unit not necessarily being one country. Examples of this are few but the possibility exists. Letting Spain and Portugal comprise one market unit on the Iberian peninsula is not inconceivable. For example, Telecom Portugal and Spanish operator Telefónica already have a certain degree of cross-ownership. Raimo Lindgren, however, does not consider it possible to combine the two countries into one market unit.

"It might seem logical, but there is a rivalry between Spain and Portugal. Spaniards are not always popular in Portugal. There is something of a little-brother complex. For this reason it would not make good business sense to consider the two countries as one market. In the future, however, some administrative cooperation might be possible between the two Ericsson companies," he says.

Ericsson conducts extensive export operations from Spain, mainly to Latin America, but also to Africa.

Raimo Lindgren believes that, with

the new organization, export issues will be handled by the organization for global customers and the product units. As manager of a market unit, his focus must be narrower. He has more time to dedicate to the Spanish market and the international operations of Telefónica.

Raimo feels there are advantages to the new organization, but he is not uncritical.

"The customer wants a strong local presence. It is not good to state that all the power is being transferred to London or Stockholm. The old organization with Major Local Companies gave us the advantage of having widely-based operations with several international platforms. Now, instead, the organization is being concentrated. That may be dangerous. Our competitors are moving in the opposite direction. Ericsson is focusing too much on geographic divisions and not looking at where the expertise is located," he says.

He hopes that the local companies will not be weakened too much.

"It is the local companies that represent Ericsson's image in a market through their behavior as corporate citizens. These are important issues that must not be ignored."

Concerning the global restructuring that Ericsson is currently carrying out, involving the elimination of eleven thousand jobs globally, Raimo believes that Spain will be affected, but that the

restructuring must take place on the market's terms.

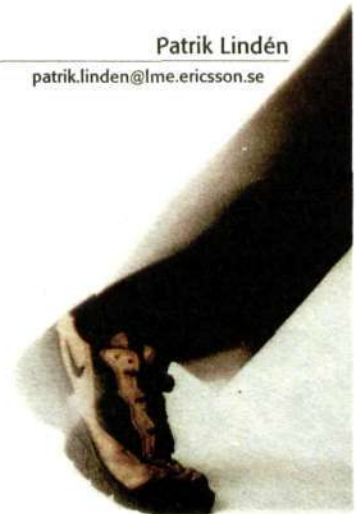
"Shutting down a plant is a sensitive undertaking. Local manufacturing is often a marketing tool. So it is wise to proceed carefully and not kick up too much dust."

Raimo also believes we should not invest too much energy in organizational issues. Implementing the new organization has been a long drawn-out process, during which Ericsson has lost momentum and force.

"There's a customer out there," Raimo points out. "The customer couldn't care less what we call ourselves or what kind of organization we have. What we need to do now is get down to business."

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"New accounts" are being established to increase Ericsson's successful relations with the newcomers of the New Telecoms World. The newcomers among today's telecom and data operators could be tomorrow's winners. In the United Kingdom, Ericsson maintains an established operation to find this type of new customer. The art is in growing with them – but always managing to be one step ahead.

The key to finding tomorrow's winners

THE KEY is to understand the market and where it is headed. Many of the would-be investors who approach us have a serious business proposition but no experience in the telecommunications area. The challenge is to identify which of them have the potential to become a force in this highly competitive market, and to then present them with a total-package solution. This could even involve having to purchase a building in order to install a new switch," says Chris Pratt, operations director for New Public Networks, one of Ericsson U.K.'s six customer divisions.

The U.K. was the first country to really experience the deregulation of a national telecommunications market. During the past 12 months, Ericsson's local company in this market has been working within a new organizational structure of customer divisions. A key aspect of this work is to find completely new customers.

THE GOAL FOR 1998 was that business involving new customers would account for 20 percent of the company's total order bookings. A major portion of the new business is within the fixed networks segment.

"Today, we have 16 customers, compared with one customer five years ago. Initially, there were some people within Ericsson who felt that this was an unnecessary operation – that it was only the really big customers who mattered. We can now see which new operators have become successful and, fortunately, Ericsson has many of them as its customers," notes Edvin Ruud, sales director for New Public Networks.

THE NEW OPERATORS are growing rapidly. In the U.K. there are about 130 companies which have been granted new licenses to conduct fixed telecom traffic and are lining up to open networks for voice and data communication.

A typical characteristic of the new operators is that they have risk capital coupled with considerable retailing experience and marketing competence – they often do affinity deals with large brand names to gain further access to large customer groups.

"It is important for Ericsson to establish regular contact with the most attractive of these. This means showing the customers our responsiveness and respect," underlines Edvin Ruud.

"We have to understand our customers' business model and those aspects of our products that can help them more than any solutions offered by our competitors. At the same time, we need to convince them that we are the partner they can rely on most. We must never compromise any of our undertakings."

Many of the new operators are American companies engaged in international traffic. They use the U.K. as a first step to penetrating mainland European markets. At the same time, U.K. companies are competing to establish operations on the deregulated European continent.

"This has led to us cooperating very closely with other local companies within Ericsson, for example its units in Germany and France. I am convinced that such cooperation will be reinforced as a result of Ericsson's new organization and focus on market units," says Edvin Ruud.

ANTHONY HOUSDEN is one of the three in Edvin's team working with business development and finding new customers. His desk currently contains a long list of companies licensed to operate in the U.K., which have

fixed networks and who are potential Ericsson customers.



Anthony Housden

"It is vital for us to be able to spot tomorrow's winners. Many of our new customers work like ourselves in a global environment and must take decisions at a global level. It is therefore extremely important that we coordinate our resources when going after new business," says Housden.

The main goal for New Public Networks during 1999 is to take care of existing customers and acquire new ones. The trend towards market consolidation and mergers between operators makes it very important for Ericsson to strengthen its position with existing customers.

"Another core issue during the current year is to safeguard systems already delivered against the millennium shift and to sell more services," explains Chris Pratt.

"In future, Ericsson will focus increasingly on handling its customers' technical operations, such as maintenance of the network. Our success in this direction will depend to a large extent on how we work with our outsourced partners in order to deliver the products of the right quality at the right time and price.

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Ericsson U.K. has been successful in gaining and growing with new customers. Chris Pratt, operations director for New Public Networks in Guildford and sales director Edvin Ruud, underline the importance of understanding customers' business concepts and supplying complete-package solutions.

Photo: Nils Sundström



Sharp focus on major global customers. Telefónica, the Spanish operator, is one of Ericsson's global customers that is regarded as so large and so important in the new organization that it has been assigned a full-time Global Account Executive to ensure that the cooperation with Ericsson goes smoothly. There are to be 15 such as coordinators in the new organization. Eduardo Herranz is responsible for Telefónica at Ericsson.

Eduardo is keeping an eye on Telefónica

A S I SEE IT, there are primarily three things that I have to concentrate on," Eduardo Herranz says. "Generate business for Ericsson. Make sure that the customer is satisfied. And ensure that Ericsson remains solidly profitable. You can summarize that by saying that it's my job to see that Ericsson doesn't miss any opportunities."

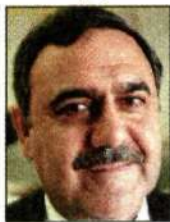
The objectives are uncomplicated but how the job is to be done is not so clear.

"I have a good idea about how I plan to work. But I have had this job

for only a few weeks, so come back in six months and then maybe I'll be able to give you a better picture of what this involves," Eduardo says when Contact meets him early one January morning in his office in Leganes, outside Madrid.

The fifteen most important global customers account for at least half of Ericsson's revenues. So it is important that the cooperation goes smoothly even when a customer enters a new market and begins to work with Ericsson's local company.

Telefónica has expanded primarily in Latin America. It has been natural to grow in countries that speak the same language and have a common cultural background. Chile and Argentina, followed by Peru, were the company's first markets outside Spain. To-



Eduardo Herranz

day Telefónica's first priority is Brazil, where they invested 3.8 billion USD last year in acquiring the São Paulo fixed network and the Rio mobile operators. From the total 2.9 million wired lines foreseen for 99, 1.9 will be installed in Brazil. Telefónica is present in many countries in Latin America and is now making more aggressive efforts in Europe. It is already managing more lines outside Spain than within the country.

"Earlier, Telefónica entered one new country per year. Now the pace is faster and they may even double the number of countries where they are currently present," Eduardo Herranz explains.

The way that Ericsson works with a large customer today differs greatly from the way things were done only a couple of years ago.

"Telefónica now wants help with a great many things that operating companies formerly handled themselves," Eduardo says. "Cooperation begins even before new licenses are issued, and long before the customer may have won a bidding competition.

If Ericsson had to wait to begin to work on a bid until the customer had made an acquisition or received a license, it would be much too late.

"This of course means that we sometimes do a lot of 'unnecessary' work. But if we waited, we wouldn't have a chance."

It is naturally a major advantage for the customer to have Ericsson already operating in the new markets that Te-

lefónica wants to focus on. Ericsson is thus able to help Telefónica when it begins to research a possible new market. Eduardo Herranz's job is then to bring Telefónica together with the local company and show that the Spanish firm is a customer with whom Ericsson already has good relations.

"As is the case with all customer contacts, personal relationships – getting to know one another – mean a great deal. I keep continuously in contact with different people in Telefónica," Eduardo says.

Most of Telefónica's managers in foreign countries come from Spain. And not infrequently they have already had good relationships with Ericsson. This is unquestionably a major advantage when you have to do business in a new country.

A person in Eduardo's job has to maintain active contacts in many areas. Telefónica is active in virtually all of the areas in which Ericsson offers solutions.

"I have to keep up-to-date with what is happening in most of Ericsson's business units. In addition, Telefónica has operations in a number of Ericsson market regions. A lot of coordination is required to keep relationships running smoothly."

"As long as we who are responsible for the large global customers can help to build volume for the market units abroad I think that we will be welcome to cooperate with the local markets," Eduardo notes. "But you have to be a little diplomatic. At the same time, it is im-

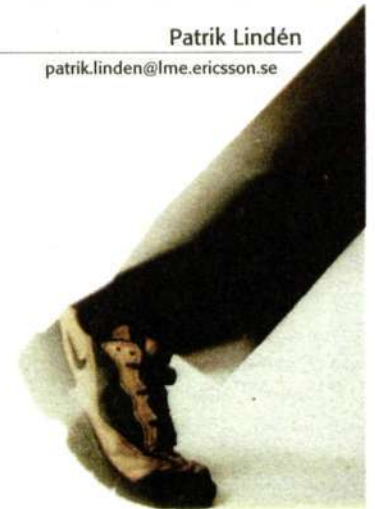
portant that we not place too much emphasis on who is responsible for the business. The main thing is that Ericsson gets the business and is able to deliver."

Coordination above the market-unit level is also required in the case of customers like Telefónica. When the company orders equipment, it is not merely for a single network in a single country; the company asks for global offers for a number of countries. In such cases, business transactions can't be handled by each market unit locally. The customer would then take its business elsewhere.

"And today it is no longer enough to have the best technology at the best price. A financing solution is equally important. In particular, if a customer is expanding rapidly, it needs help to be able to afford to grow fast enough."

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Precision and speed

MATS GRANRYD, Ericsson Sweden, is Key Account Manager (KAM) for Telia Mobile. He confirms that customers surveys rate our base-station deliveries highly – with a grade of nearly 100 percent.

“Time is everything,” he says, adding that shorter times automatically mean better quality. With short delivery deadlines, things have to be done properly the first time.

At the GSM Systems business unit – the former GSM, NMT and TACS – a major project has been under way for almost two years: World Class Supply (WCS). The aims of WCS include substantially shortening lead times, a concept that encompasses delivery times. This has certainly been accomplished: 45 days have



Mats Granryd

been cut to 15, globally. For Swedish operator Telia Mobile, delivery time was reduced even more, to no more than ten working days.

“When we worked with longer delivery times, we often had to maintain an inventory of base stations. This was because it was becoming more difficult to plan long term, since conditions were changing constantly,” says Sofia Rudolfsson. “Site conditions could deteriorate, or perhaps the electrical cables hadn’t been installed yet. We want the base stations to be delivered directly to the site and nowadays this is what normally happens.”

Mats Granryd stresses that it is important that the projections made by customers are correct. The short delivery times place high demands on Ericsson’s purchasing operations and suppliers. The supply of resources must be guaranteed throughout the entire manufacturing chain preceding deliveries.

Speed is the key to success in the future.

“Nowadays, base stations are delivered to us within two weeks. Delivery precision is also much better. It used to take six to eight weeks,” explains Sofia Rudolfsson, in charge of Ericsson base-station logistics at Telia Mobile in Sundsvall, central Sweden.

“What is new for us is that we now make near-term forecasts. Previously, we only issued predictions quarterly, outlining our requirements for the following nine months – specified per month or per quarter, depending on how far in the future the requirement lay. Now, apart from the quarterly forecast, we also issue a monthly near-term forecast listing our weekly requirements for the following two months,” says Sofia Rudolfsson.



Sofia Rudolfsson

Currently, Telia Mobile places orders directly with the Ericsson plant in central Sweden, where the base stations are manufactured, tested and packaged.

Via our electronic ordering system, EDI, orders are sent directly from Telia

Mobile to the base-station plant. Previously, orders were sent by post, through Ericsson Radio Systems’ marketing department in Kista. Sofia Rudolfsson is in direct contact with plant employees and speaks highly of them. The plant employees for their part now enjoy direct contact with customers, making their work more interesting and enjoyable.

Sofia Rudolfsson is very pleased with the shorter delivery times, and currently sees no need to shorten them further.

Telia Mobile’s requirement forecasts are reliable and its needs do not fluctuate wildly. The customer configures the order, independently determining the components of the base-station delivery. A conceivable future development might be to relay requirement forecasts addressed to the plant via the Internet.

Gunilla Tamm

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“We have installed five hundred mobile sites in six months, which must be some kind of world record,” says Bo Andersson, head of Ericsson’s Israel office, which has tested the new method of delivering all equipment in a complete, fully-tested package.”

Installations picking up pace

THEIR SPEED IS INCREDIBLE, reaching as high as 40 sites per week.

The construction phase was virtually without a hitch and today the network is in commercial operation, one-third of it fully built.

The new “wonder tool” that has enabled the drastic reduction of delivery and installation time is called Total Site Solutions, which makes it possible to carry out an installation on one single occasion.

“We definitely believe in this solution, even though the concept is not fully developed and we still have to perform some tests on site,” Bo Andersson adds.

All equipment – base stations, antennas, cables, etc. – is collected along the way, according to the “merge in transit” principle, and delivered to the local organization at a “Coordination Takeover Point” (CTP). This can be a car-park or other reloading point in the vicinity of the installation. At the CTP, the local organization (the Ericsson company or some entrepreneur) assumes responsibility for the delivery. Up to the CTP, the Supply Unit is re-

sponsible for the completeness of the delivery.

All this requires a change in the role of Ericsson’s suppliers. They will account for an increasing proportion of actual production, and deliver complete sub-units to the Supply Unit, which will be more concerned with the assembly and final testing of the product.

“We operate on a ‘milk-pail’ principle,” says Lars-Göran Hansson, who is responsible for establishing the entire delivery chain for GSM base stations. “We pick up our components en route, and have basically no inventory.”

In other words, the idea is that the customer should be able to have all equipment delivered to a site simultaneously, and that it is in full working order immediately. The customer receives a fully tested “Total Site Solution.”

“Previously, operators themselves assembled the components, but nowadays they haven’t the time,” says Kurt Sillén, Market Manager for GSM base stations and site solutions. “Our trials involving total site deliveries have worked well. There have been times when our people have arrived at a site

to find a competitor already installing and testing its own equipment. After a few hours, when we had completed our installation and left the site, they will still be struggling with laborious testing procedures.”

The new ordering procedures – by which the customer orders equipment in accordance with the desired characteristics (network size, etc.) – are much easier than sitting and looking for article numbers in catalogs and they also save a lot of time for everyone involved. And the installations are correct from the start. For example, when a microwave link is delivered with a microwave base station, the contacts, cabling, antennas, and all other necessary components are included. All the customer has done is to specify an indoor or outdoor base station. A cell-planning tool has done the rest.

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