

CONTACT

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Jan Stenberg leaves a "will"

Ericsson's vice president Jan Stenberg is leaving the company to take over as head of SAS. In a farewell interview for Contact he stresses the significance of continuing work with TQM. The company will lose all trust among its customers if TQM efforts are not pursued and made permanent, Stenberg says.

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Ramqvist at the Royal Society

In a widely recognized speech at the Royal Society in London, Lars Ramqvist gave a lecture on "Innovation". He was invited by the british secretary of trade and industry, Michael Heseltine.

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Reorganization at the top

Apart from Jan Stenberg's departure, other changes are being made in Ericsson's top management. Three corporate functions are being merged into one, while new managers are being named to several key positions in the company. 1994 began with lots of news at the highest level.

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First real pocket phone

It is the lightest and the smallest. Weight 200 grams, length 13 cm. Ericsson's new pocket phone now appears in the NMT version. It is now being launched as the first real pocket phone.

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Photo: Ole Walter Jacobsen

Ericsson in Lillehammer

Ericsson will not bring home any gold medals from the Olympic winter games in Lillehammer, but it still participated in its own way in the contests. The company was represented in the arenas and around the ski tracks with several

products. For example, the Norwegian police in conjunction with the Olympics put their news fully digital land mobile radio system – an EDACS system from Ericsson – into operation.

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Ramqvist streamlines technology

1994 began with a real "executive overhaul" at Ericsson. Lars Ramqvist thoroughly reshuffled the group's top management.

"The changes that are now taking place are a further step in the streamlining of Ericsson's activities and the necessary adaptation to the changed market scene," says Lars Ramqvist.

On January 24 a number of changes in Ericsson's management was announced. The mass media's interest concentrated on the fact that Jan Stenberg was appointed as new head of SAS and thus leaves his post as vice president of Ericsson. At the same time Lars Ramqvist chose to announce a number of previously planned changes in the company's management, which forms part of a separate article here.

Streamlining

Lars Ramqvist emphasizes that the organizational and personnel changes had nothing to do with Jan Stenberg's leaving Ericsson on March 1. They had been planned well before. The changes aim at further strengthening coordination of Ericsson's activities in technology and production, reinforcing the group's efforts on new operators and making sure that Ericsson is really keeping up with fast-moving technological and market developments in the U.S. just now.

"1990 I introduced the corporate functions Purchasing/Production and Product Management. We needed then stronger integration across business area borders of work around our systems platforms," says Lars Ramqvist.

"This move has been very important for Ericsson. It has led to significant coordination gains in advanced development of AXE. Not least in the so-called K-project - the new broadband platforms."

Overhaul in company's management

Better structure

In purchasing and production, the streamlining has gone considerably further today than a few years ago. The job of halving production units from 65 to just over 30 continues, and right now Ericsson has some 40 own production units.

"Product coordination, which Karl Alsmar was involved with, has also been very important. For the first time Ericsson was able to establish a common product portfolio where different products were brought together and complemented each other."

U.S.A. in focus

In the fall Bo Hedfors was assigned the task by the chief executive to devote more time to technology developments in the U.S. It is here that telecommunications of the future is being developed. Thus we need better coordination and more systems-platform thinking from Ericsson. It will be a tough battle among suppliers for the large orders that are expected to result from, above all, investments in cordless telephony and broadband technology - ATM.

"Bosse has a tough job in the U.S., where it really calls for



FURTHER COORDINATION. The next step is now being taken in the coordination of technology and production. Three corporate functions have been merged into an overall Technology designation.

being on site full-time in order to keep up with the swings."

Mobile telephony grows

1993 has meant fantastic development for Ericsson's mobile telephones, above all digital.

"In a short time it has become a very important activity that is now nearing 10 percent of the group's turnover. But at the same time this area has proved to be full of challenges regarding production, purchasing and distribution.

"I have therefore given Johan Siberg the assignment to lead mobile telephone activities. At the same time Ericsson Mobile Communications AB will answer to the parent company for all terminal activities, with Johan as president."

Lars Ramqvist is convinced that it is important for the group to invest in mobile telephones. Mobile telephone operators demand good sets to put in the hands of customers. And moreover mobile phones play a very

important role in giving Ericsson a higher profile in the market.

New operators

Last year Karl Alsmar handled the important role of leading Ericsson's activities toward new tele operators. As head of network engineering activities in business area Business Networks, he has a key role with thoughts of how markets are evolving just now.

"This is an area that so far has evolved beyond expectations. Thus it's important for the group that Kalle can now concentrate on this task.

Strengthened technology

Now all questions about technology, purchasing, production and product development will be merged into one and the same corporate function. This makes it possible to further strengthen and streamline our technology efforts," says Lars Ramqvist.

"Anders Igel has been assigned the important task of new

technology director. He is a person who has shown himself very capable in the matter of integrating and coordinating different activities."

"Ericsson Ltd. is a Major Local Company that today serves as a model for the others, with its strong customer orientation and its very good and close relations with customers."

"To further underscore the importance of continuous work with TRIM and TQM, I have also put these areas of responsibility under new technical management.

New manager in England

"In conclusion let me welcome Nils Grimsmo as new manager in England. He is already on site where he is responsible for the largest division in the company. The good relations he has established in so short a time with his chief customer - BT - bodes well for Ericsson.

Text: Lars-Göran Hedin

3,1 billion profit for 1993

Ericsson's preliminary report on 1993 operations confirms that the company is in a strong upturn right now. The pre-tax income amounts to SEK 3,1 billion, more than twice as much as the year before.

Based on preliminary accounts, Ericsson's order bookings rose 27 percent, to SEK 65,6 billion (SEK 53,4 billion in 1992). Net sales increased 34 percent to SEK 62,9 billion (47,0). Pre-tax income amounted to SEK 3,1 billion (1,3). An extraordinary amortization of goodwill amounting to SEK 305 m. has effected

the operating income during the fourth quarter. Net capital gains after deduction for minority interests amounted to SEK -40 m. (57). Income per share after taxes and full conversion of outstanding debentures was SEK 10.30 (3,20).

All business areas reported higher net sales. The sharpest increase was posted

by Radio Communications, whose sales rose more than 70 percent, making it the largest business area.

"Despite uncertainty in the international marketplace and intensified competition, I feel optimistic about our development in 1994", said CEO Lars Ramqvist in a comment.

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There is no way back!

During the last three years Jan Stenberg has traveled the world with TQM in his luggage. TQM, Total Quality Management, has been his pet concern. That's why Jan's "will" centers around continuous improvement, customer focus and the participation of all.

"TQM has been the most profound experience for me during my years at Ericsson," says Jan.

Quality has always been an area that interested Jan Stenberg. As business area president he witnessed many quality follow-ups during the '80s and he saw that they did not function as they should.

"They were too superficial. You could obscure a problem by frankly neglecting to talk about it," Jan asserts. Hence, he never doubted for a minute when he took over practical responsibility for the Ericsson group's overwhelming quality work. Together with the then new technology director, Bo Hedfors, he decided that he himself would drive quality issues from his vantage point in the executive leadership.

TQM-company circle grows

"Together with Sture Ögren I got "a parish inquest" on quality work in the big companies under way. We took it upon ourselves to rate the companies and in this way trigger internal competition to be best in quality work. This became the first sprout for commitment to TQM. But it took a full year for it to ripen."

In the fall of 1991 Ericsson's TQM pursuits were reinforced by top management. The target was set for quality work and all the big companies were drawn into TQM work. Since then the circle of TQM companies has grown steadily. Today, there are some fifty companies around the world involved.

Began in Sonthofen

"Actually, TQM began back in Sonthofen," Jan Stenberg believes. "Without being aware of it himself, Lars Ramqvist used the same language as TQM when he painted his vision of Ericsson in the '90s. All the important elements were there, without having been declared as TQM."

"Customer focus, continuous improvements and involvement" were key words that came back time and again in the chief executive's message in both Sonthofen and Linköping in 1990."

A bit of the way

After two years and some months Ericsson has come a good bit of the way with TQM, Jan feels.

"We are beginning to see real changes in company culture and attitudes. At the management level just about everyone agrees on the usefulness and necessity for TQM. But it takes time before this insight

trickles down into the organization and permeates the entire company."

"The task of spreading TQM widely could be carried out even more intensively, but it has to be done in such a way that it has never run the risk of being perceived as a "campaign." TQM is quite something else. It is a voyage without end – and without return," Jan points out.

He feels that now that Ericsson has taken it upon itself to implement TQM there is no turning back. The company will lose all trust among its customers if TQM efforts are not fulfilled and made permanent.

Confidence in Igel

Now that Jan Stenberg himself is leaving the utmost responsibility for quality work, he gives his assurance that TQM work is in good hands for the future.

"I have spoken with Anders Igel a couple of times about this subject and I know that he will drive these issues just as hard as I myself did. Anders, who takes over from Bo Hedfors as technical

director, thus becomes officially responsible for quality work and he will also shoulder the real burden.

"True enough, Anders stood a while on the docks and had his doubts before he came aboard the TQM boat, but the converted often become the strongest believer."

Much to be done

It is a huge and important task that Anders Igel has ahead of him.

"I have already mentioned that TQM culture must be spread further. Then Ericsson must become better at weighing its priorities. This means finding the right balance between daily job assignments and the need to improve our way of working at them.

"Another important task is to truly realize the leadership model that was presented at the management meeting in Hasseludden. And top management must become more visible in quality work.

"And then more breakthroughs are needed, more real improvements in areas that are critical. This applies not least to technology development. Today it costs Ericsson 1.5 billion kronor a year to correct the increasing number of fault reports on newly developed software. A rapid break in this trend is called for."

Just talk

Fault reports are a good example of the importance of measuring. Without measurements you cannot pinpoint the costs of bad quality. Here, important steps have been taken in the right direction in recent years. But there is still a lot to be done.

"When we learn to measure, then we can set up quality targets. The targets will have to be numerical, so they can easily be confirmed by different methods of measurement. Otherwise, it's all just talk."

Text: Lars-Göran Hedin

Stenbergs will a fiery speech for TQM

After 27 years in Ericsson, Jan Stenberg takes over as president of SAS. In his "will" he emphasizes the significance of continuing work with TQM. Photo: Magnus Torle

"A cat among the ermines"

A personally directed question, from one humanist to another: How does it feel to be in top management at Sweden's largest engineering company when you yourself never attended engineering school?

"Well," says Jan Stenberg, "I remember my first business trip. We were leaving from the old international departure hall at Arlanda and it was a big group making the trip. A guy from the AXE side caught sight of me and wondered: What on earth is he doing here?"

Jan realized a long time ago that he would never penetrate the physical aspects of telephony. But surrounding all technology there is a considerable mass of humanism. It is the humanists who have the answer to questions like "how does one organize activities," "how does one

motivate people," "how does one drive a project." All working and handling of systems is, despite everything, human work.

"Today most technicians understand this, but still there are many who set up protective walls around their technical proceedings. They name projects with funny alphabetical abbreviations so that only the insiders can understand. And then they try to shake off the "enemy" by changing the letters from time to time."

"Letter sickness is an ever common complaint in Ericsson. You cure it and you will increase the chances of those who work in the company to understand each other. Humanists and technicians need each other. Thank goodness the realization of this has never been felt as much as it is being done now."

"Success is built on innovation"

Today Ericsson is a company with a very good reputation internationally. The same applies to our chief executive officer, Lars Ramqvist. A clear indication of this is his recent invitation by the British secretary of trade and industry, Michael Heseltine, to speak in the Royal Society at a seminar on innovations. The lecture was relayed by satellite to three cities in Great Britain and it was excerpted in many international publications. Here follows a full summary of Ramqvist's speech in London.

"Ladies and Gentlemen, it is my sincere pleasure to be with you here tonight and to share with you our experiences within Ericsson of establishing an on-going programme of innovation in the expansive and technology-intensive international telecommunications business. How did we do it? Before answering that question, I would like to spend a few minutes on the influence of society on the process of innovation.

Sweden as a society has always encouraged innovation in science and engineering. The Royal Swedish Academy of Science was founded as long ago as 1739.

During the early days of our industry, Swedish companies were successful, exporting tar, copper and cast iron all over Europe.

In the last 100 years, we have developed our steel and paper and pulp industries. And just think of Swedish product innovations like the separator, the safety match, the automatic light-house, the three-phase electrical generator and motor, the refrigerator and the ball bearing. To a great extent as a result of these innovations, Sweden has enjoyed the benefits of being one of the largest exporting countries in the world on a per capita basis.

All these very important innovations were the result of inventors and entrepreneurs joining forces with financiers. One thing was already clear a hundred years ago: Innovation needs money and risk capital.

Worse conditions today

Today, however, I am much more concerned about the influence of society on the climate for innovation. Swedish manufacturing industry in fact represents only 19 percent of GNP, which is low compared with most industrialized nations. I read the presidential address given to your Royal Academy of Engineering by Sir William Barlow in September last year. Here, Sir William clearly expressed his concerns about education and training in technology and engineer-

Noticeable speech by Ramqvist in London

ring in the U.K. I'm afraid I have the same concerns about Sweden.

In my view, there are absolutely no short cuts to industrial recovery in Sweden in the short term. The only solution is to start with basic education, encouraging young people to study natural science and technology and strengthening the quality of higher education and research at university level.

Studies must pay off

People are rational in their thinking and behaviour. In Sweden, our politicians and unions have created a situation where education is no longer "paying off" during a person's lifetime. So why study at all?

Sweden must therefore lose no time in encouraging education by allowing people to earn higher salaries as a result of knowledge, competence, quality and flexibility. Simple as it sounds, it will take years for this to happen. At the end of the day, though, it is absolutely essential if Sweden's capacity for innovation is to be protected.

Strong corporate culture

How is it then that Ericsson has been so successful over the past few years? From what I have just told you, it is obvious that our innovations were not something that were given for free by Swedish society, but were carried out by us, by the people employed at Ericsson. In fact, our innovations, as I see it, are a direct result of our corporate culture, our shared values of professionalism, respect and perseverance.

Today's business environment is tough, and is getting tougher every day. Customers and technologies change quickly, competition is aggressive and economic conditions are unpredictable.

The recession has led to a global overcapacity never seen before, also in the telecommunications sector. Capital no longer

knows any boundaries, nor do skills and knowledge. Global competition is the name of the game. Only the fittest will survive. Time to market and time to customer will be increasingly important.

For us at Ericsson to be able to perform well under these circumstances, we recognise that our product strategies, our innovation process, must be supported by a strong corporate culture.

You need informed and committed people to handle the concurrent and increasingly more complex innovation process in an optimal manner.

Shared values

Ericsson has a long and strong tradition of commitment to certain values. These values are the framework of our culture, and our culture is a tool for innovation and for reaching our strategic goals.

Our mission, our business concept, our objectives and our values are equally important for the understanding and development of business.

But talking about our shared values is not enough - we must constantly confirm them in practice. And take action if they are at cross-purposes.

We should also be aware that, in a changing world, we must be willing to re-examine our values and update them if necessary.

The Ericsson mission is to understand our customer's needs of telecommunications and to meet these needs better than any of our competitors. Our objective is to be the leading international supplier in our field.

We use our pooled and unique competence to design the best systems, capable of solving telecommunication problems worldwide.

Excellent employer

We are committed to strengthening our international profile, and on a large scale we post em-

ployees from one country to another to broaden their experience.

To remain the leading international supplier of telecommunications, we must attract, develop, and keep excellent employees.

This means that Ericsson must be regarded as an excellent employer. Our personnel is our most important competitive asset, since no other resource is capable of long-term growth and improvement.

Corporate values must be easy to understand. Our three key concepts of professionalism, respect and perseverance should not really require any elaborate definitions.

But words in themselves will never create a corporate culture unless they actively guide our daily work.

Professionalism

The Ericsson culture emphasizes professionalism very strongly. Our style is customer- and objective-oriented, with clearly defined goals in terms of quality and

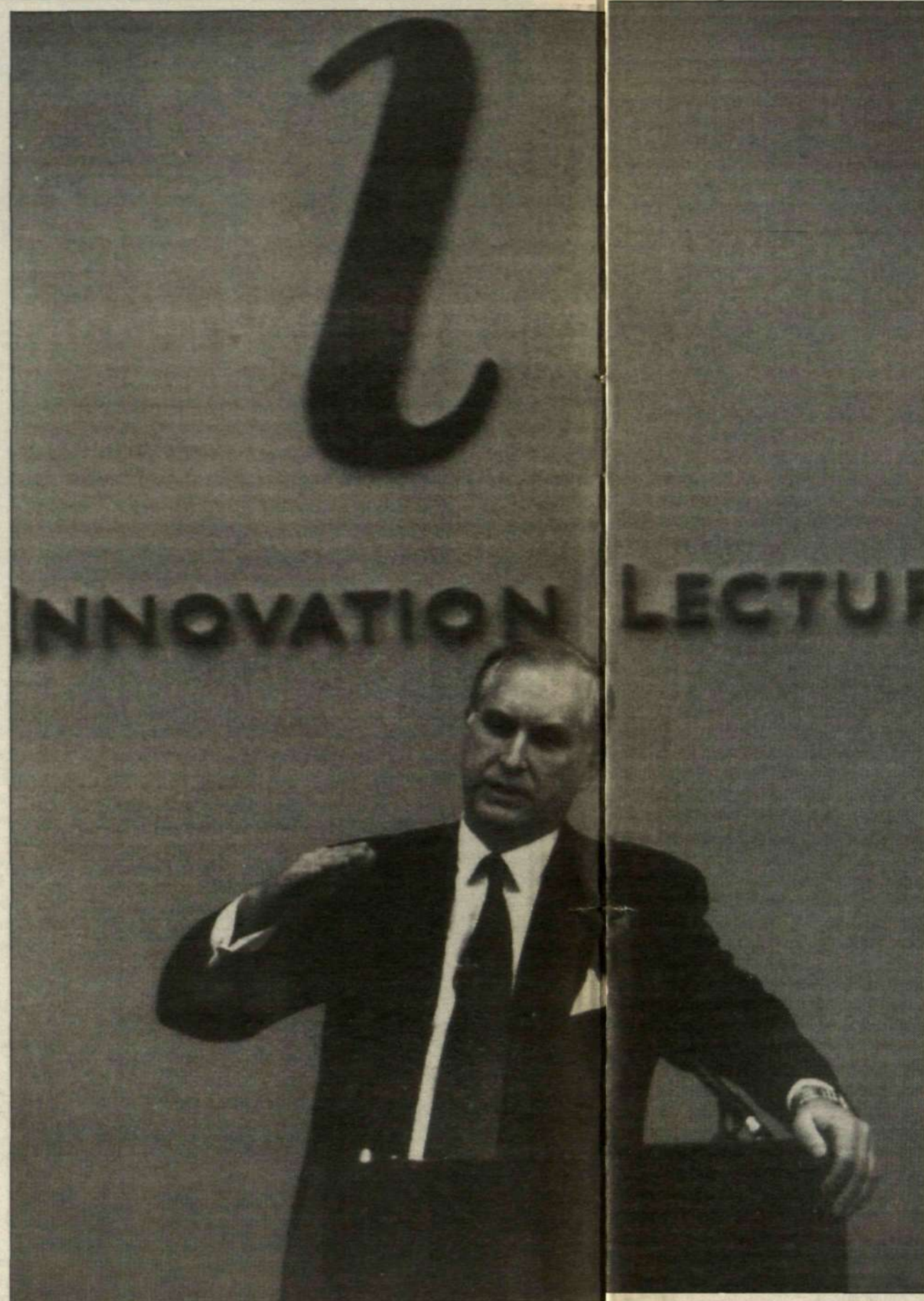
profit. Our ambition is to increase our knowledge base in all our areas, all the time.

We will do all we can to apply a holistic world-wide outlook, by planning on a global basis and working locally. Both in the geographic sense and in our system projects.

The word *respect* characterizes our working climate and our attitude to staff, skills and style. We favour an atmosphere of openness in which we show concern for each other. We want to create a strong sense of responsibility by promoting personal development, job satisfaction and a feeling that our work is meaningful.

Through respect, support and responsiveness, we will demonstrate the strength of our teamwork to everyone we deal with: To our customers, business partners and suppliers, to our shareholders and the authorities, and to the media.

Perseverance means that we pursue our goals with determination and staying power.



te for innovation. We must communicate the image of a strong, competent, unified Ericsson, internally as well as externally.

We have our corporate visual identity and our image. Our international advertising is currently based on the theme: "It's about communication between people. The rest is technology".

Tough message

Well, ladies and gentlemen, let me now speak about "the rest", technology.

When I took over as president and CEO of Ericsson back in 1990, I announced a substantial increase in our R&D programmes. In 1992, 14,000 engineers were employed in 40 R&D centres in 20 countries. Total development costs represented about 22 percent of sales. This major development investment, which, including investments in new equipment, is at present equivalent to close to one-and-a-half billion pounds annually, was made at the same time as the recession hit telecommunications.

In November 1991, I had to meet with a number of investors on Wall Street to tell them about our continued, expanded R&D programmes. Obviously, my message was clear - less short term profit, but hopefully a brighter future for Ericsson. In other words, perseverance, and maybe some courage. Because what I told them was that Ericsson would be spending almost fifteen times as much on development as on dividends to the shareholders.

Mobile challenge

My decision at that time was based on the business opportunities we saw in expanding our mobile telephony business, and in new products and services for the wired public network.

Back in 1990, the telecommunications operators in Europe had decided to go ahead with a new standard for digital mobile systems based on the GSM standard. For nationalistic and political reasons, the Americans and Japanese also decided very quickly on new digital standards. But different ones, of course.

Having been world leader in analogue systems for the last 10 years, and serving more than 12 million out of a total of 30 million mobile subscribers by January 1994, Ericsson had to decide on how to tackle the digital challenge. Should we develop all three new digital standards or not? Should we develop them all at once? As a benchmark, you should know that each digital system requires a minimum of one million manhours, with R&D costs of a corresponding size.

We want all our managers to feel that they belong to one global Ericsson organization.

Good image important

Ericsson is an excellent international company with highly qualified personnel. Our activities are based on a solid foundation of corporate values. Our mission is clear, and we have a well defined strategy for reaching our objectives.

But today it is not enough just to be excellent - we must also be perceived as excellent. This is very important, and a prerequisite

for innovation. We must communicate the image of a strong, competent, unified Ericsson, internally as well as externally.

That is good news bearing in mind that during this decade the number of mobile telephone subscribers is expected to grow to 100 million worldwide. More than one third of orders received last year involved product areas that did not exist one or two years ago. Orders for new products in radio communications accounted to as much as one half of bookings. Obviously, we were able to prove to investors that R&D is paying off even short term. But this is of course not always the case.

Since risk capital is a scarce resource - and will always be - it is of utmost importance for innovation and development that financiers take a longer view on investments in R&D. As in the early days of industrial development, today's innovation requires money and risk capital.

Micro electronics

One very important reason for our successful innovation record in mobile telephony is, in addition to radio technology, our skills and investments in micro electronics. No supplier can be successful in telecommunications without having full access to advanced micro electronics.

You all know how expensive it is to develop new processes and design tools for sub-micron BICMOS technology. Each new generation of processes has a price tag of one to two billion U.S. dollars, an investment very few companies can carry themselves.

Successful partnership

Back in 1987, Ericsson established a partnership with Texas Instruments, a world leader in micro electronics. This partnership has proven to be an excellent one, and in fact a prerequisite for the success of Ericsson as a supplier of telecommunications systems. Ericsson designers have full access to very modern micro electronic tools and are able to design our products and systems as the very state of the art when it comes to price/performance.

Broadband investment

The traditional core business of Ericsson has always been public telecommunications. In this area, technology is also developing very fast.

Here, Ericsson is spending more than 30 percent of sales in technical development. New market needs demand new products and systems in transmission and access networks, broadband switching and maintenance and operations support systems.

Broadband switching is needed for video communications. I think we all realize the importance of being able to communicate over the public telecommunications network using video phones, interactive TV, "Video on demand" and multimedia.

Alongside mobility and data communications, broadband will be the next breakthrough in telecommunications.

Ericsson recognizes these new market needs, and our R&D programmes are already up and running to meet all these new demands.

Broadband switching encompasses very advanced technologies all the way from sub-micron high speed electronics to advanced software, support systems and fiber optical transmission. Ericsson employs around 7,000 engineers on the development work for telecommunications switching.

Changing market place

I have mentioned the expanding mobile system business, micro electronics and rapidly changing mobile and broadband telecommunications as driving forces in our innovations at Ericsson. Let me now move on to two other very important areas - the market place and quality.

In telecommunications, deregulation, liberalization and privatization continues. The teleadministration monopolies - the "PTTs" - are disappearing or have already disappeared. This is a truly profound change for both operators and manufacturers. For us it means new conditions and new opportunities and a whole new set of challenges that we have to meet.

The pulse of the market will be more rapid, the pace faster, and demands on suppliers will increase dramatically. For Ericsson, the challenge is to serve the market - operators and service providers - better, faster and with higher quality than our competitors.

Flexibility and quality are trademarks for innovation during the 90's.

Quality in focus

A cornerstone for innovation is quality and price/performance of our systems, products and services. Quality will play an increasingly important role in the 90's. As a basis for our quality work at Ericsson, we have our quality manual and the ISO-9000 certificates. But this is not enough. Quality is set by our customer, and we must always try to satisfy the customer.

We strive to zero defects and take proper preventive actions.

Our long term perspective spells out that quality is subject to never-ending improvements. In our daily work, we set numerical goals and plans, which are tracked and reviewed. Everyone in Ericsson must participate in this work. Through our Total Quality Management programme, we know that quality will be the best selling point for Ericsson in the 90's.

Standards and patents

Huge R&D programmes, efficient production based on modern micro electronics and advanced software, high quality and excellent price/performance of products and systems... All these factors may be seen equally important to innovation in any telecommunications company. Let me also add standards and patents.

In modern life, standards play an increasingly important role. Standards make it possible for you to call any of the 650 million subscribers in the world's telecom network, regardless of the

country in which the subscriber is located and despite the fact that different system technologies are being used. Innovation must follow standard.

As to patents and intellectual property rights, it is now obvious that any successful innovation must be legally protected. Since it is costly and time-consuming to obtain proper patent protection, this could hinder innovation, especially for small companies or individuals. Here, I believe society could assist financially in one way or another.

Local presence

Finally I would like to touch upon one more important factor for innovation. As inward investors in many countries we strive to build our activities in those countries to serve their specific markets, and we also work hard to be good citizens of that country. The UK is an excellent example for Ericsson. We captured our first orders here at the turn of the century. It is almost 100 years since we established our first manufacturing facility here.

No shortcuts

Ladies and gentlemen, in my speech tonight, I have shared with you our experience of innovation. Some of you, I am sure will probably think I have covered to many things to explain innovation. But my message to you is clear.

No shortcuts exist to successful innovations. You must cover practically every aspect of modern industry: R&D skills in basic technologies, advanced production, total quality management, marketing, sales and local market presence.

Furthermore, you should be located in a society that encourages innovation, that provides the necessary platforms for education and basic research.

Your success depends on your skills and your ability to select and implement - at the right time - the most important factors that comprise the innovation process.

Combined skills

In my description of successful Ericsson innovations, I have especially mentioned factors important to us, like an ability to grasp, in time, the challenge in the fast growing mobile telecommunications market; our skills in advanced technologies such as micro electronics; our new products and services in public telecommunications; the importance of flexibility and quality, and our local market presence. A prerequisite for time to market and time to customer and therefore to successful innovation, is that all these activities are carried out not step-by-step, but concurrently - in parallel and interchangeably with each other.

This was, in short, my story about innovation, based on the combined skills of our people. In other words, innovation generated by professionalism, respect and perseverance.

Thank you.

Excerpted by:
Lars-Göran Hedén



IN NEW JOBS. Anders Igel is new technology director, Joahn Siberg takes over Ericsson's mobile telephones, Nils Grimsmo is new manager in England and Karl Alsmar concentrates on new operators as head of network construction activities in Business Networks.

Ericsson changes at the top

Lars Ramqvist has issued a long list of new managers. At the same time corporate functions are being partly reorganized, with the aim of further coordinating the group's activities.

Corporate functions Technology, Purchasing/Production and Product Management are brought together under one unit, with Anders Igel as head. In recent years Anders has been responsible for the important British market, as

president for Ericsson Ltd. Apart from the combined responsibility for technology, purchasing, production and product management, Anders will also be responsible for the group's quality work through TQM, where TRIM activities are an integral part.

Hedfors to U.S.A.

The former technology director, Bo Hedfors, continues with his assignment of coordinating Ericsson's technical activities in public telecommunications and radio communications in North America. Bo has been working half-time in the U.S. since the fall but will now be moving over to Richardson, Texas, full-time.

Johan Siberg, who previously headed Purchasing and Production, has been given top responsibility for Ericsson's mobile telephones, as head of business unit Cellular mobile telephones in Business Area Radio Communications. At the

same time Johan will be president of Ericsson Mobile Communications AB, which will be the parent company for all mobile phone activities. He will report directly to Lars Ramqvist.

Anders Torstensson will concentrate full-time on the important American activities on the terminals side.

Sten Fornell leaves his post as president of Ericsson Mobile Communications AB to concentrate fully on his assignment as business area controller in Radio Communications.

New operators

Karl Alsmar, who along with his role in product management also led the business unit for new tele operators in Business Area Business Networks, will now concentrate on this growing activity.

Nils Grimsmo takes over from Anders Igel as head of Ericsson Ltd. in England. Nils will continue simultaneously as head of the largest division in the company - Public systems. **LGH**

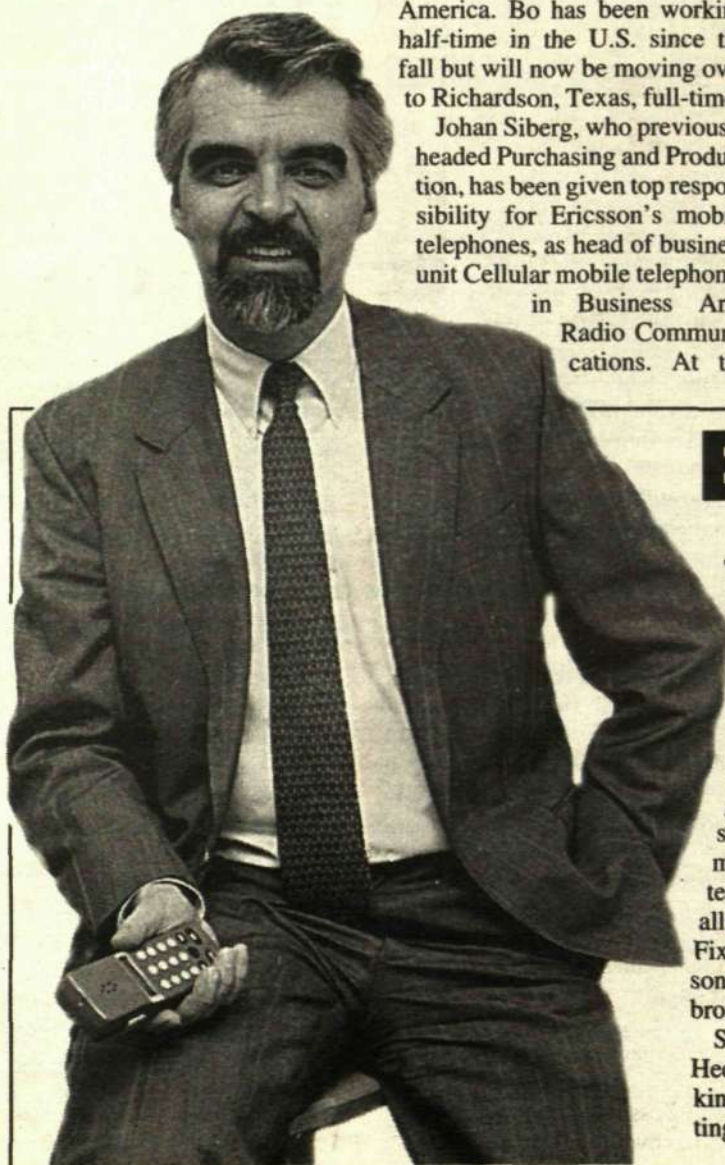


Stenberg to SAS

Ericsson's vice president Jan Stenberg is leaving Ericsson. On March 1 he will start as new president and chief executive of SAS. Jan has been a member of the executive committee since

1990 and before that was head of Business Area Public Telecommunications.

No successor to him in the executive committee is foreseen for the present.



Ericsson's toughest job?

To tackle the American challenge and make Ericsson a leading supplier of future tele systems in the U.S. This is Bo Hedfors' new job - one of the company's toughest.

The U.S. is not only Ericsson's largest market. It is also the market that is most forward directed in technology, in all the important areas: Fixed telephony, personal telephony and broadband.

Since the fall Bo Hedfors has been working hard on coordinating Ericsson's activiti-

es in North America. His task has been to coordinate development centers in the U.S., Canada and Mexico to work along the same lines. Some 800 engineers in all are working to make sure that Ericsson can play a significant role in the U.S. market.

"We are now working with the sharpest applications that Ericsson has today," says Bosse. "The big

challenge is to use these to give Ericsson the best possible position in the race for future contracts in PCS, broadband and mobile telephony.

"Right now it is the PCS system above all that is in focus. Frequencies will be auctioned in May. It will be the start for very big negotiations. Ericsson must be present here to offer the right technology, whether it is based on D-AMPS, DECT or GSM."

When it comes to broadband the group has joined together with the American company Reliance.

ATM switches from Ericsson and video equipment from Reliance is a strong combination," says Bo. He is aware that he has important tasks ahead of him.

"It will be nice to concentrate on the U.S. Now I am back in a situation that reminds me of the situation ten years ago." Then the market was also in a strong phase of development, as a result of the emergence of the regional Bell companies, and Bosse played an important role as president of the joint company that Ericsson set up with Honeywell.



ERICSSON AT OLYMPICS. Ericsson contributed with several products to communications during the winter Olympics in Lillehammer. In conjunction with the games the Norwegian police put the fully digital radio system Edacs into operation.

Ericsson up front in Lillehammer

A weekend is left to go for the Olympic Games at Lillehammer. Sixty-six nations with about 1,900 contestants have valiantly fought for coveted medals and new world records.

Ericsson, too, has played its part with several products behind the scenes in this event.

It was a huge responsibility that rested with the Norwegian police during the winter Olympics in Lillehammer. Close to 3,000 police officers were responsible for order and security for more than a million spectators, contestants and VIPs.

The high demands were placed not only on the police force but also on their equipment. Trustworthy and precise communication was a prerequisite for a job well done.

It was in July 1992 that the Norwegian police entrusted Ericsson with supply of a fully digital radio system to be put into operation in conjunction with the Olympics.

GPS distribution

The contract called for a switch, eight sites and 1,300 radio base stations (both portable and fixed installations).

Edacs covered the entire contest area in Lillehammer, Oslo, the airport and roads between Oslo and Lillehammer (about 200 kilometers).

Edacs is used for transfer of voice, mobile data and GPS. GPS is used for vehicle location via satellite. Central police headquarters could follow VIP transportation all the way from the airport to Lillehammer through the car's GPS receiver which continuously relayed its position via Edacs.

Project management, economics and technical responsibility lay with Ericsson Mobile Communications in Sweden. Ericsson GE's factory in Lynchburg was responsible for manufacture and Ericsson A/S in Norway for marketing and sales.

"So far the Norwegian police has been extremely satisfied," says project leader Olof Karsberg, who informed us that just on the inauguration day 51,000 calls were put through.

"That would never have been manageable with a non-trunk radio system."

Mobitex in mail vans

Ericsson's mobile data system Mobitex also participated in the Olympics. Several housing quarters and restaurants were set up to handle the tremendous increase in the number of inhabitants.

To deal efficiently with supplies and invoicing to restaurants as well as service Norway's largest brewery used Mobitex for transfer of payments from portable pay terminals.

And to give the temporary Lillehammer residents an efficient postal service GPS receivers were installed in the mail vans, which relayed their position this time via the Mobitex network. This way one was able to monitor at all times the location of the mail vans.

Paging system

Before the games Ericsson Radio Messaging had supplied base stations for two applications of the nationwide paging system Radiotex. One order covered extensions of the Radiotex network (169.8 MHz). In Radiotex they have introduced alphanumeric services, which during the Olympics was used for coordinating bus traffic, among other things.

The other order concerned radio base stations for the American operator MTEL, which during the games wanted to give its American customers paging service on the same frequency as in the U.S. (981 MHz).

"MTEL has an agreement for use of Norwegian Televerket's infrastructure and, like them, chose Ericsson as supplier of radio base stations to cover the area that



Lena Willma from Ericsson Radio in Kista was chosen through her sports club to run part of the stretch with the Olympic torch during its passage through Sweden.

extended to the Olympics activities," says Roland Hägg, from marketing at Ericsson Radio Messaging.

The buildup in Lillehammer was a first step for MTEL, which thereafter planned together with Norwegian Televerket to increase coverage over all of Norway with the same infrastructure.

Now as the big event moves toward its conclusion, well executed after several years of preparation, Ericsson leaves its tracks standing in the snow. Professional communications systems for continued use and in many instances for expansion into huge parts of Norway.

**Text: Helena Andersson
Photos: Ole Walter Jacobsen**

Researchers move into sharp projects

In half the time it normally takes, a development project at Ericsson Radio has laid the base for the next generation of radio base stations for the mobile telephone system GSM. Thanks to the fact that the research unit participated throughout the entire project they succeeded in a short time in developing both an advanced platform for coming micro base stations and not least in introducing an entirely new work methodics.

— miniaturizing base stations for GSM system



IMPORTANT CIRCUIT. Claes Hammar shows an ASIC, a square centimeter large silicon chip with integrated functions, which make it possible to miniaturize, among other things, mobile telephones and base stations. ASICs are very advanced circuits that take a long time to design, not surprising then that they are christened (e.g. Tor) and later, like paintings, decorate the walls of researchers' corridors.

At Ericsson's business area Radio Communications there is a research unit, RCUR, that has been assigned to look far into the future to research and impact developments beyond the year 2000 but also to introduce new technology, work with today's best tools and see that knowledge is transferred to "sharp" projects.

One example of the last named is the ongoing mobile telephone project aimed at improving radio base stations in the GSM system. In the design phase, which was just completed, all resources were thrown in and top experts from RCUR were brought in for a close collaboration.

Now that the prototype circuits are ready for verification, we can confirm that they have come up with a new solution in half the normal time, at considerably lower cost and significantly higher quality.

Cut costs

This is the background. Ericsson's first GSM base station was developed in 1991, with the aim of acquiring at any cost a functioning and flexible systems solution that would be easy to improve later.

This radio base station, RBS 200, was designed with a large number of digital signal processors with software meant for signals and data processing. This, with the functions implemented in the software, of-

fered a flexible solution, that is to say it is simple to introduce changes, but on the whole it called for a lot of computer power. The result was a large base station, costly to manufacture.

A project to improve the base station (called the LSI project, Large Scale Integrated circuit) was begun therefore as soon as it was confirmed that it was stable and that specifications were stabilized.

By incorporating several functions in so-called ASICs, that is own designed integrated circuits, they could achieve base stations considerably smaller and cheaper. Moreover they could be manufactured much quicker. In spring 1992 a feasibility study was done, which one year later became the actual project.

"Already in the feasibility study we collaborated with the research department," says project leader Thomas Öster. The new programming language VHDL had been studied a bit at RCUR by Claes Hammar, which showed how to implement signal processing in ASICs.

(VHDL is a hardware descriptive language for, among other things, design of

ASICs where it can be used for both simulation and a synthesis tool, see diagram).

Simulating

Claes Hammar had more than ten years' experience in working with silicon and in 1989-90 joined in developing ASIC circuits for the first mobile telephone for GSM.

"It was this experience that we would now bring over to GSM's base stations," explains Claes. "When we were ready with the mobile phone we loped toward the base station and in a pilot project began to ponder whether we could not develop the technology further for that as well."

It seemed possible and project workers from GSM and RCUR drew up a kind of strategy. They began by saving a lot of time by verifying by means of simulation (every saved day meant a huge sum of money) and in this way "debugged" hardware and software well before it was manufactured.

They also had to bring in the VHDL tools through the entire process in the development work. (Without simulating and VHDL it would have been unusually difficult, if at all possible, to develop the complicated ASIC circuits needed.)

In the main project LSI, which was a project on a significantly bigger scale than RCUR's pilot project, it was a case of further developing the design methodics that were needed to develop complicated ASIC circuits and to also model the base station's interface against the network in the VHDL language.

Pioneers

The project has advanced very far.

"Prominent manufacturers with whom we have contact say that we are in the frontline when it comes to design methodics for development of complex ASICs," explains Thomas Öster.



"The methods and processes we use in the project are well documented," says project leader Thomas Öster.

Language that simplifies designers' cooperation

VHDL is a language for describing functions and components in electronic systems. VHDL, which stems from the programming language ADA, became an international standard in 1987.

Advanced systems for computer-aided design contains, as a rule, software from a number of different suppliers. Before VHDL became standardized many suppliers used their own description language,

which made it difficult to get a computer tool that cooperated in one system.

With the introduction of ASICs with VHDL the designer describes the circuit function in VHDL. Computer tools then translate function descriptions into an ASIC solution. This work method makes new demands on designers since knowledge is needed about both program development and hardware design.



Illustration: Leif Sundberg

A STEP CLOSER TO RESEARCHERS' DREAM. Researchers' dream, an antenna on a chip, has come another step closer. In a large mobile telephone project for GSM experts from the research unit at Ericsson Radio brought with them very advanced knowledge about work methodics and design on silicon to the other participants. The result is that now a platform can be laid for the next generation of base stations; small, cheap, energy-saving micro base stations that will increase the system's capacity considerably.

circuits for GSM base stations. In figures: the functions in one of the new circuits should call for 30-50 circuits in the old model. There each and every one of the old circuits is equally large and as costly as the new one.

The project

Experiences in the project are overwhelmingly positive. Four persons from RCUR took part in the task, that is to say they moved from the research department and joined the development unit for GSM base stations.

They participated in systems design and systems modulation, where they built modules that described the system. They also took part in the important simulating work.

For the other members of the team, who had no previous experience of the new de-

velopment methodics, the experts' presence meant immense stimulation and up to a point that explains why they were able to learn the work methodics so fast.

"I believe more than half of the participants in the project have now learned to work with VHDL and ASICs. They have learned to work in an entirely new way, which must mean a lot for their personal development," says Claes. "The entire department has acquired a platform and knowledge from which to work further."

"We have built up a strategic competence here in the GSM unit," says Thomas Öster, "and that will have a significant impact for the future. Now I dare to say we have mastered this technology."

"It was also stimulating to get to work with the absolute best and most modern on the market. RCUR's recommendations regarding hardware and software, synthesis

tools, suppliers, etc. were followed 100 percent. This increased our own need to succeed, we could not put the blame on lack of resources and money."

Possibilities

What we have come up with now is a base station with considerably reduced power consumption, which costs significantly less and that is much quicker to manufacture. On the surface it looks like before, the housing is the same. But it is in the process of being changed from within. Close to 40 percent has already been replaced with new solutions and since all parts are compatible changes can be made at will. Thanks to the common stative platforms the newly developed signal process cards can be used to complement the existing base stations out in the field with additional transceivers (channels).



"Knowledge development in a company deals with both acquiring basic knowledge and then seeing that it is dispersed throughout the organization," says Erik Örnulf, head of the research department.

Knowledge stored in our brains

"There is knowledge stored in the brains of researchers in the department," says Erik Örnulf, head of Ericsson Radio's research department.

"If we are to get this out into the organization we must play an active, personal part in the various development projects. The above-mentioned project with GSM base stations is a good example of how this can be done."

Ericsson lives in a surrounding of constantly growing competition. In order to offer the right products the technology flow must be constantly improved.

The research department RCUR has as its mission to monitor what's happening on the technology front, learn new technologies and understand their possibilities for future product supply.

"This is a many-faceted job," Erik Örnulf explains. "We work together with colleges and universities but also with other units and research centers in the company. We also participate in standardization work and in different development projects."

Assembling knowledge is only one step, the other is to spread it in the organization. Spreading is best done in so-called new development projects, where RCUR is actively involved.

It is only in this way knowledge can be handed over to other brains and contribute to raising the general knowledge level in the company. **LC**

The radio base station RBS200 in its modified, cheaper form will be competitive several times over, until the next generation RBS 2000 micro base stations take over.

The project has also resulted in a platform for an entirely new generation of GSM stations, which in future in the form of so-called micro base stations will considerably increase capacity in the network.

RMOG, the business unit that, among other things, works with the GSM system, reckons that 100 million kronor was invested in developing methodics and learning technology and that the entire project will have paid for itself in about a year and a half.

Lars Cederquist

(The project was also part of a pilot project in improvement work in Ericsson)



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Mobitex helps them to help

"With Mobitex we have got a mobile computer system with which to grow and develop." So says Leif Christensson, responsible for emergency services at the Stockholm County Council. By June, Ericsson Mobile Communications will have supplied Mobitex equipment for a total of 320 ambulances and emergency service vehicles.

The council's choice of Mobitex was based on, among other things, the desire for a flexible communications system, simple and cheap to expand on.

New radio system in 320 ambulances and service vehicles

"Moreover, the fact that Mobitex is a well-known solution – in more and more council units – also weighed heavily in arguments for its selection," says Leif Christensson.

When it comes to rescue service communications it is the council's civil defense department that handles negotiations.

"We choose solutions based on a total defense perspective. Here too Mobitex has flexibility, possibility for nationwide coverage and above all the fact that it can build up a general communication system for all rescue services were decisive factors," explains Henry Andersson of the defense department.

Ericsson's commitment covered supply and installation of radio modems, printers and control unit.

Life-and-death contact

Thomas Brzezinski and a colleague run MT Akutbilar. On assignment from the County Council they run, with 20 employees, ambulance and emergency services in the south Stockholm area and Nynäshamn.

For Thomas and his colleagues, reliable communication between the alarm center and emergency personnel can – literally speaking – mean the difference between life and death in many situations.



HUGE INVESTMENT IN MOBITEX. A total of 320 ambulances and emergency vehicles are covered in the order from the Stockholm County Council. Ingrid Bodén, Ola Höök and Thomas Brzezinski, MT Akutbilar, have already installed Mobitex. Here, too, are Henry Andersson, of the County Council's civil defense department, Ulf Tångring, Ericsson Mobile Communications, Leif Christensson and Owe Johnsson from Färdtjänsten as well as Martin Törnberg from SL Specialbuss. Ingrid Boden (Inset) has been using Mobitex as a test system for a year now.

In one of his vehicles Thomas has had a Mobitex installed as a test system for about a year now.

"Mobitex is a superb communications tool. Voice radio traffic in Stockholm is often heavily loaded, which sometimes jams communication and even cuts it off. Mobitex can handle even more users in the same time".

Full coverage important

There were a number of teething troubles during the test period. Among other things coverage did not work up to 100 percent. For rescue personnel it is very important to have full coverage every meter. In addition Mobitex was sensitive to disturbance in the emergency vehicle, where a lot of other electronic equipment is installed. Until these problems are resolved there will always be backup with other communication equipment in the vehicles. Before the system goes into full operation the council will check fault sources in the network, installation and software.

"The day the system functions optimally Mobitex will be an excellent communications tool," says Thomas.



Martin Törnberg at SL Specialbuss feels Mobitex can help in making emergency service traffic more effective.

An additional advantage of the system is that in the event of catastrophic medical emergencies Mobitex can summon additional resources, equipment as well as alert emergency rooms at the hospital.

"A third stage is that in wartime Mobitex can be used as an information channel from military commanders to hospitals,"

says Henry Andersson.

During the spring it will be the service buses' turn. Beginning in February an average of 50 buses a week come through Ericsson's workshops for installation. In July the system will be completely in operation and about 1,000 persons will have undergone introduction and training in Mobitex.

Investing in a new radio communication system for service vehicles will be done through a joint planning project in '94.

"An investment where the City Council will be spending more than 60 million to streamline and coordinate Stockholm's transport traffic," says Owe Johnsson, responsible for the council's buses.

Exciting opportunities

Entrepreneurs are also connected to the council. The biggest is Greater Stockholm Transport Authority, SL, with school transport above all.

To minimize idle time the stage after finished installation will be used to coordinate public transport with taxi. Drivers relay their location via Mobitex, get a message back about eventual taxi presence in the area and in this way direct the taxi to the next transport booking.

"We see many exciting opportunities to evolve further with Mobitex, both for the council's, the entrepreneur's and – not least – the public's benefit," say Leif and Henry.

**Text: Helena Andersson
Photos: Björn Seger**

MACHINE THAT COUNTERACTS PAIN



Physical therapist Katarina Norin in the Medical Department changes places so that Mari-Anne Berg could get a proper working posture. Photo: Torbjörn Gustafsson

Oh, my neck aches. Unfortunately this is a relatively common complaint in most companies. The right working posture preventive health care is the best medicine against future complaints and pains caused by sedentary work. The message from Ericsson's Medical Department is that everyone should have a relaxed working manner.

An important measure that can prevent difficulties and pain is to adapt the workplace. For example if you work with computers it is very important to unburden your forearms by resting them on your desk. This you can do by sitting well within the "slot" of the desk and by moving the mouse and the keyboard further away from you on the desk so that you have more room for your arms.

Myometer signals wrong posture

how great the strain is on the shoulders and the breastplate region.

Send impulses

The shoulder muscles send out electric impulses, which the Myometer reads. When the working posture is strained the machine emits a beep. The greater the strain, the more intense the machine beeps.

By varying the working posture, learning to get a relaxed working manner and sitting correctly you can avoid a lot of problems with your shoulders and neck.

Joséphine Edwall

Machine alerts

To help you to find the right working posture Ericsson Medical Department's physical therapist has come up with a rescue called Biofeedback, or Myometer.

A machine that beeps and "alerts you" when you are in the wrong position. It has electrodes that can be connected, for example, to muscles in the shoulders. The myometer then shows how tense the muscles are.

Employees in Ericsson who have problems with their shoulders or pain in their necks can get help from the Medical Department at an early stage, thanks to the Myometer, among other things. The aim is to arrive at the right working posture and then habituate yourself to it. In order to get the best results tests are carried out on employees who perform basic activities frequently during the day.

The Myometer's electrodes are taped over the shoulder muscles. These muscles show



PAIN CAN BE AVOIDED. By having a relaxed working manner and sitting correctly you can prevent a lot of pain in your shoulders and neck.

Photo: Peter Nordahl

Furniture that's kind to the eyes and body

Buying nice furniture is no real art. On the other hand, to find nice, functional and ergonomically sound furniture at a reasonable price is more difficult. How do you know which furniture is ideal?

Ericsson's AEI group knows. AEI stands for Arbetsgruppen Ergonomi och Inredning, the group concerned with ergonom

and furnishing. The group consists of representatives from several business areas and from the Ericsson Office Administration (Fastighetsförvaltningen).

They are specialists in job environment, purchasing, ergonomics and furnishing. They also have a special agreement with several furniture suppliers and architects.

"Because of that we can assist and see that Ericsson employees get nice, comfortable and reasonably-priced workplaces," says

Ulrich Vilmar, responsible for the group.

"Comfortable, functional furniture does not have to be ugly. At present the trend is to combine beauty with functionality, quality and price."

Good prices

This is possible, thanks to the group's special agreement with, among others, Facit and Kinarp, furniture manufacturers.

"It has actually occurred that units that ordered furnishings

with outside help after a while noticed that the furniture did not function. So they were forced to order new pieces. It is precisely this that we want to prevent."

Good furnishings are flexible and offer mobility and the possibility of changing working postures. This is something that AEI is sold on.

Ergonomy important f

"We take into consideration the individual worker's need so that he or she can have the right fur

niture that he or she at the same time can be happy with. The company's medical departments in Southwest Stockholm and Kista are usually the ones that show personnel with back problems and strain injuries which furnishings are best adapted to prevent damage."

Ergonomy is an important factor in the choice of furniture.

Comfortable and pretty

Many units have moved in recent times. They have discovered

how difficult it is to know what they really need. Several units have now turned to the AEI group for help since they realize there are so many aspects to take into consideration.

"In fact there have been more and more contacting us, which is very satisfying. Previously I thought that many had the feeling that furniture ordered through Ericsson was ugly and boring. Now they realize that's not the case," says Ulrich Vilmar. **JE**

How you can avoid pain in shoulders and neck

1. Position the desk so that you can comfortably rest your entire forearm on the desktop.
2. Place the keyboard a bit into the desk so that you have sufficient room for your forearms.
3. Sit properly well into the "slot" of the desk.
4. Sit near to the edge of the desk and correctly on your chair so that you get support for your back.
5. Hold the mouse as shown in the picture. You can easily move your hand from mouse to keyboard.
6. Keep your feet firm on the floor. Make sure you do not have undue pressure on the back of your thighs.
7. Use as often as possible the adjustment variations of the chair.



Ericsson Business Communications is the group's Belgian company. Activities center chiefly around Ericsson's products in business communications.

A Belgian performance

Ericsson Business Communications, the group's subsidiary in Belgium, received a real Christmas present last year. On the very eve of Christmas the company was certified according to ISO 9002. This means the entire company is now officially recognized for its quality system.

The quality review at Ericsson Business Communications was carried out by SGS, a European Institute for quality certification. The company was approved on all its activities, including sales, installation and field service on tele switches, radio equipment, computer communications equipment and network equipment. It took the Belgian company just about a year to achieve this enviable goal.

In order to attain the certification a five-point strategy was drawn up at the beginning of the year. The five points covered the areas of customer focus, fault prevention, personal commitment, zero fault in deliveries and a far-sighted vision for better relations with customers. That the strategy succeeded is attributed to the fact that all employees stood 100 percent behind it.

For example, lead times were shortened considerably as a result of reorganization in the supplies department. A special "Help Desk" was set up to deal with questions and eventual complaints from customers. Ericsson Business Communications in Brussels has in this way not only joined the large number of companies in the group that are now ISO 9000 approved. With the ISO 9002 certificate the company is one of those that have come furthest in its quality work.

Collaboration with Reliance in Video-on-Demand

Ericsson Network Systems and Reliance Comm/Tec Corporation in the U.S. have formed a collaboration team that will set up field tests for Video-on-Demand services in the American market.

The collaboration aims at combining the companies' various expert knowledge in the areas of technology and marketing. Ericsson has wide knowledge regarding ATM switching and access solutions, Reliance has experience of multimedia in broadband network and knowledge on the access products side.

The collaboration group will also seek close contact with other companies that work in the area of Video-on-Demand to swap experiences.

The goal for Ericsson is to be able in the future to offer the market full-service solutions.

Video-on-Demand offers services such as, for example, ordering movies, interactive video games and training programs. The customer order services from home and then gets them delivered via cable network to his TV.

Mobile phone system for Japan

The first Japanese mobile telephone system from Ericsson has been handed over to the customer. The system will be tested from now until April and will then be open for the first 10,000 subscribers in the Tokyo region. The network is built to be able to be used by a total of 150,000 subscribers.

Ericsson also has other projects in digital mobile telephony under way in Japan. In Osaka a new system will be delivered in March and in Nagoya the network will be ready in summer. By then Ericsson will have supplied systems with capacity to offer mobile telephony services to a total of about half a million subscribers.

The road to China goes via Hong Kong

Pagers and mobile telephones are a very common scene amid the bustle in the streets of Hong Kong. Businessmen from around the world meet here and make quick decisions. Telecommunications is important and Ericsson is one of the major suppliers of equipment. Hong Kong is also the "sluice" into China for the company.

Ericsson Communications (HK) Ltd. was established in 1985 and at the end of '94 it will have about 200 employees. The company has grown rapidly. The almost explosive expansion in telecommunications in the People's Republic of China impacts the company. For legal reasons a lot of business with China goes via Hong Kong and last year sales increased by 400 percent.

Hans Ekström is president of Ericsson Telecommunications China and chairman of the board of Ericsson Telecommunications Hong Kong. In an editorial in the company's internal publication he deals with the big business opportunities in China.

In order to accomplish that task resources in Hong Kong and Beijing must be increased and collaboration between the two companies must be closer yet. Hans believes the vision of "One Ericsson, One China" can be a reality in a few years.

John Gilbertson is president of Ericsson Communications in Hong Kong, and he is a good example of collaboration between the compa-

es. John spends more than half his time in China, most of it in Beijing, Shanghai and Guangzhou.

Lead position in mobile

Telecommunications are very well developed in Hong Kong, and Ericsson is active in several areas. For example, the international traffic is handled by three AXE switches. The rural and small-town DRX switches are very successful in China, and this business goes via Hong Kong.

"When it comes to mobile telephony there are four operators today who together ha-



Here in Hong Kong telecommunications are well developed, says Anders Moberg. Above with his secretary, Marva Tong.

ve six systems. Of these operators two have bought equipment from Ericsson, says Anders Moberg, marketing manager for public and mobile telephony in Hong Kong and Macau.

In statistics regarding the number of mobile telephone subscribers in different countries, Hong Kong now figures in seventh place. The Nordic countries are highest. A few years ago Hong Kong ranked fifth, which was ahead of Denmark.

"The reason for Hong Kong dropping in the statistics is that the analog system does not suffice. It lacks frequencies and therefore it cannot take on any new subscribers," Anders explains. At the same time this means that the GSM system is taking off.

GSM

It was in June 1992 that the operator Smartone ordered equipment for a GSM network from Ericsson. Installation and operations went very fast and today the system

has about 20,000 subscribers. Hong Kong's other GSM supplier has bought equipment from Nokia.

Pacific Link is Ericsson's oldest mobile telephone customer in Hong Kong. In 1989 they ordered an analog ETACS system, which has 60,000 subscribers today. Two years ago Ericsson supplied a D-AMPS system to Pacific Link.

"The network still has not had any large number of users, about 8,000, which is attributed to the fact that so far there have been too few types of telephones for D-AMPS," Anders explains.

Macao and China

Macao belongs to Ericsson Communications' market. The small Portuguese colony lies some 50 minutes away by hydrofoil from Hong Kong. As for telecommunications in Macao, Ericsson dominates by far.

As for mobile telephony on the huge fast-growing Chinese market, the country is divided up into four regions. One of these is run by Patrick Wong from Ericsson Communications in Hong Kong. He works with Sichuan,



Patrick Wong works with mobile telephony in three provinces in central China.

Hunan and Guangxi in central China.

"Ericsson has systems in the three largest cities in the provinces. True enough, the number of subscribers is still small, but there is a base. Together these provinces have about 200 million inhabitants," says Patrick.

Gunilla Tamm

Fourth training center set up in Hong Kong

Ericsson has three training centers for mobile telephony, in Sweden, Ireland and Malaysia. It is quite natural that the fourth is being set up on the threshold of China - in Hong Kong.

"It was the move before autumn to new larger premises that made it possible for us to set up a training center," says Charles Henshaw, responsible for Operations at Ericsson Communications Ltd., Hong Kong, and who led the way in setting up the training center.

The premises, which are about 700 sq.m., will take up to

200 "students" a year. It will accept primarily persons from Hong Kong, Macao and China.

Two training switches

For practical training there are two switches and equipment for mobile telephony.

Initially there will be training in AXE with installation and maintenance as well as radio base stations.

Later there will also be courses in specific areas such as cell planning for mobile telephone systems. Eventually all the cell planning for China will be handled from Hong Kong.

Courses at the training center in Hong Kong will be flexible

and they can be adapted to demand.

To begin with, the instructors will be recruited from Europe but the intention is to train local instructors, who can take over a great part of the training courses.

"This means that we will be able to have courses in Mandarin for trainees from China," Charles explains.

Customer training

Besides training of Ericsson personnel, customer training is also very important.

"With our training center we are taking a real step toward more complete customer support.



Charles Henshaw, responsible for Operations at Ericsson Communications, led the way to setting up the training center.

Ericsson must not only deliver products of high quality but also see to it that customers are

knowledgeable so that they can use and maintain their systems from the very start." GT

"MADE IN CHINA"

Radio channels tested in the aggregate warmth of Swedish saunas. Chairs, desks and measuring equipment just as in Sweden. It is only when you first go out of the factory and pass the vegetable market at the edge of the road outside that you realize how far away you actually are from Sweden. The place is Guangzhou Ericsson Communication Ltd. in southern China. Here they have taken the first step in the manufacture of base stations for the Chinese market.

During 1992 Ericsson established two joint companies for mobile telephony in China. The first, Nanjing Ericsson Communication Company Ltd., was set

Joint company gives a foothold in China

up at the beginning of the fall and the other, Guangzhou Ericsson Communication Ltd., at the end of the year.

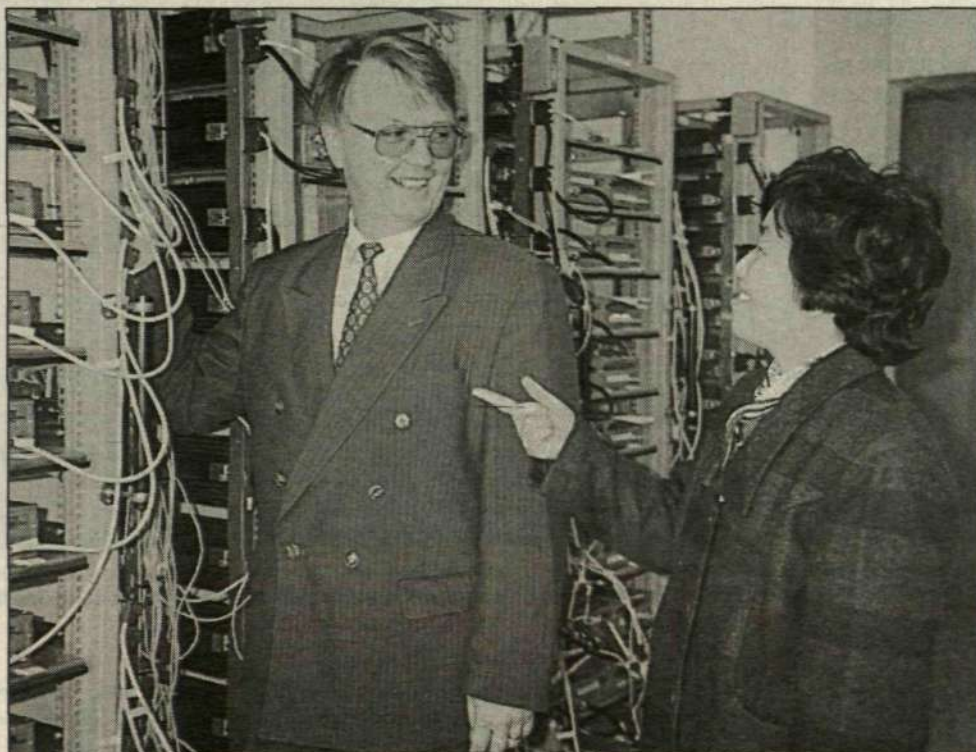
Leif Ohlstenius, together with Sören Boman, has been responsible for setting up the two joint-venture companies, which both have full organization in marketing, operations, administration and production of mobile telephony systems. Sören is president of Guangzhou Ericsson and Leif marketing manager. They both moved to China in May last year.

The agreement on the joint company Guangzhou Ericsson Communication Company Ltd. was signed in December '92. Ericsson is majority owner with 56 percent, Guangzhou Radio Factory has 30 percent and another minority owner is the mobile telephone operator Guangdong Mobile Communications Corporation.

"Through our joint companies we have gotten a real foothold on the Chinese market. We have also shown the authorities that we are prepared to invest considerably in the country," Leif explains. Several of the big competitors in telecom set up joint companies in China somewhat earlier than Ericsson.

Biggest system

Guangdong province, with 60 million inhabitants, lies in southern China and is one of the country's most expansive provinces. The impact of Hong Kong is immense. The provin-



SWEDEN-CHINA COLLABORATION. Leif Ohlstenius, marketing manager, together with a Chinese colleague, Madame Wang, vice president of the joint company Guangzhou Ericsson Communication.

ce's largest city is Guangzhou, which was earlier called Canton. Already back in 1987 Ericsson's first mobile telephone system in China went into operation here.

"Up to '91 there was little growth in the number of subscribers, but the real boom came in '92," says Leif. With more than 240,000 subscribers the system is now Ericsson's largest mobile telephone network in China. In total there are more than 650,000 subscribers in the country.

In February last year ERA received an order for China's first GSM system, which will be installed in Guangdong province.

Local manufacture

Half of the radio base stations for TACS that are manufactured at the Gävle plant will be delivered

to China. The need for local manufacture is thus very big and during 1993 they began to manufacture channels to a small extent in both Nanjing and Guangzhou.

"Last year we manufactured 200 channels and this year we will raise that to 3,800," says Sadru Jamal, who is production manager. Just like Nanjing Ericsson, manufacture began with "picking" channels from so-called kits. First it was done on the board level and then on the components level.

Repair operations

Besides manufacturing there will be repair operations, which will allow damaged units to be replaced.

Today the factory has a job leader, someone responsible for lo-

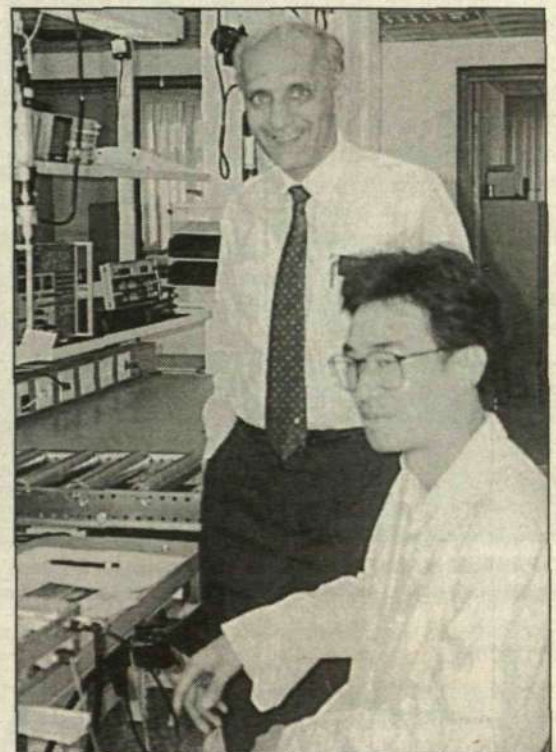
gistics and ten collective employees. At the end of the year the number of workers will have increased to 40.

"The Chinese are both knowledgeable and efficient, so it's not difficult to find personnel. Many of those who work at Guangzhou Radio Factory want very much to come over to the modern Swedish factory," says Sadru.

Row houses

The joint company has its premises at Guangzhou Radio Factory on the outskirts of the city. Near the factory there are row houses for employees and at the roadside there is a vegetable market every morning.

"The premises here are a temporary solution and we are cur-



FROM GÄVLE TO CHINA. Sadru Jamal from the Gävle plant together with one of the employees at Guangzhou Ericsson Communication.

rently looking for land to build a new factory later on," says Leif, as he shows us around.

Study tour in Gävle

Wang Wen Qun is vice president of the joint company and last spring she made a long study tour at the Gävle plant.

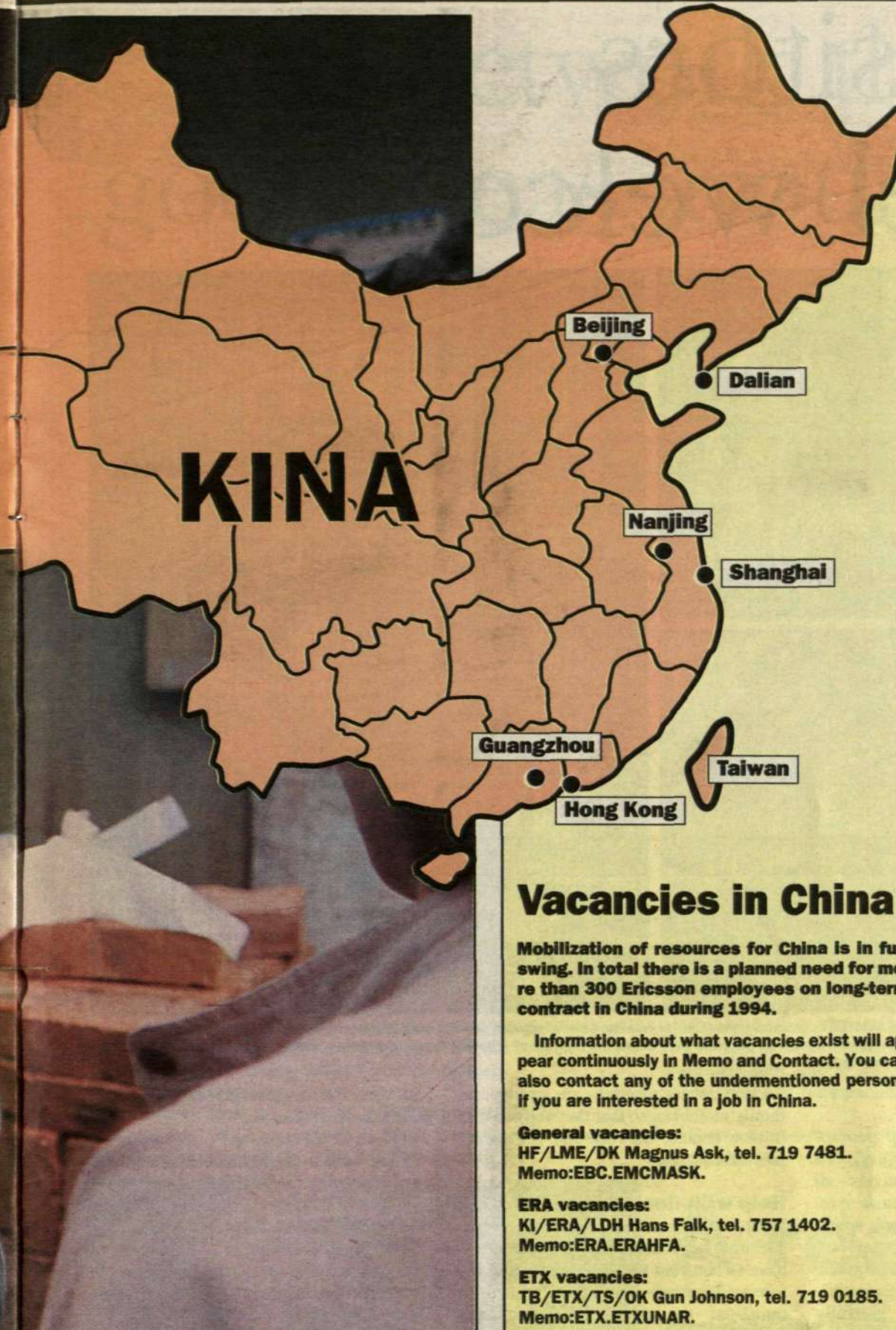
"It was interesting and constructive to see the complete manufacturing process," says Madame Wang, who herself is an engineer specializing in radio communications. She sees a positive future for the joint company.

"Telecommunications is a priority area in China. Ericsson is an international high-technology company, which can handle huge tasks here," she concludes.

Gunilla Tamm



EXPANSIVE MARKET: Shanghai is the center for Ericsson's activities in China's eastern region. In the area there are just over 126 million people, of whom only 2.7 percent have telephones. In Shanghai alone the authorities are planning to install 4.5 million new lines between now and the end of 1995 and an additional 2 million lines between 1996 and the year 2000.



Vacancies in China

Mobilization of resources for China is in full swing. In total there is a planned need for more than 300 Ericsson employees on long-term contract in China during 1994.

Information about what vacancies exist will appear continuously in Memo and Contact. You can also contact any of the undementioned persons if you are interested in a job in China.

General vacancies:
HF/LME/DK Magnus Ask, tel. 719 7481.
Memo:EBC.EMCMASK.

ERA vacancies:
KI/ERA/LDH Hans Falk, tel. 757 1402.
Memo:ERA.ERAHFA.

ETX vacancies:
TB/ETX/TS/OK Gun Johnson, tel. 719 0185.
Memo:ETX.ETXUNAR.



"Here in Shanghai is China's largest and Asia's third-largest international tele exchange. So says Jan Hultgren, head of LM Ericsson International AB, Shanghai Representative Office.

Shanghai a "new but old" trading place for Ericsson

The expansive multimillion city of Shanghai is an important place for Ericsson's activities in the People's Republic of China and from here work in the eastern region is handled. In the area there are just over 126 million inhabitants and of these only 2.7 percent have phones.

me six months now was transferred to the joint company Nanjing Ericsson Communication Company. Their marketing department for mobile telephony has its office in Shanghai.

International exchange
A smooth-functioning telephone network is an important part of the infrastructure that is now being built up in China. A central decision is that the number of telephone lines will be increased by ten million a year.

"Already in 1900 Ericsson had operations in China, when the first manual telephone switch was put into operation here." So says Jan Hultgren, head of LM Ericsson International AB, Shanghai Representative Office. Jan has been stationed slightly more than three years in Shanghai and has been able to follow rapid economic developments.

"The whole city is like a large job site. High-rises are springing up and small food stores, where you previously bought food with coupons, are transformed in a few weeks into stereo stores and fashion boutiques," he says.

"The authorities' plans for Shanghai is four and a half million lines from 1996 to the year 2000," says Jan. "An important task for Ericsson is, among others, the international tele exchange in Shanghai. It was expanded in December last year and is now China's largest and Asia's third-largest international exchange."

"China is an interesting market not only for AXE and mobile telephony," says Jan, pointing out, among other things, transmission, pagers, Minilink, mobile radio and PABX MD110 with applications for the countryside.

More employees

In Shanghai there is the world's largest deep-harbor port. "The Dragon Head," as the city is known, competes with Guangzhou (Canton) in being China's most expansive city. It is a battle that will be resolved in 1997 when Hong Kong reverts to China.

Ericsson's office in Shanghai began operations in '88 and has fifty employees today. A number that will increase further during the year with an additional 25 contract workers.

All customer contacts are handled from this office, regardless of product. One exception is mobile telephony, which for so-

"Seeing is believing"

Personal contact plays a major role for the Chinese. Thus, it is important for Ericsson to have personnel out there in the Chinese provinces. Customers have a positive impression of the company, but many see Ericsson as a "Swedish" company in a small country far away.

"There is a Chinese proverb that says 'seeing is believing,' and that is very true," says Jan. "Trips taken together with Chinese customers to Ericsson in Europe and the U.S. have contributed to helping the Chinese understand how international the company really is.

Team-work and perseverance in China

Ericsson's logo is fixed to the door of room 80812 in Jin Jiang Tower Hotel in Shanghai.

Since more than half a year now the marketing department of the joint company Nanjing Ericsson Communication Company Ltd. has been working out of here.

Ericsson's mobile activities in China are divided into four regions, of which the eastern region is run from Shanghai.

"Besides the city of Shanghai we handle the provinces of Zhejiang, Jiangsu and Hubei. In these areas there is a total of about 168 million people, which amounts to about half that of Europe," says Jim Gill. He is marketing manager at Nanjing Ericsson Communication Company Ltd. and was previously marketing manager

for mobile telephone systems at Ericsson Communications Ltd. in New Zealand.

Challenges and problems

"Seven, eight years ago I was among those building up market share at home in New Zealand so I know that it is a process with both challenges and problems and that it can take some time before the organization is running smoothly. In order to succeed there must be flexibility," says Jim.

His job consists of two parts. One is fulfilling the mobile telephone contract that Ericsson won in eastern China, the other is developing the marketing department in Nanjing Ericsson so that it could eventually bring home its own orders. The number of employees will increase from four to ten this year. Of these, about half are locally employed.

There are two mobile telephone systems in Shanghai today and both are analog TACS systems. One is supplied by Ericsson and the other by Motorola, and the systems are equally extensive. Those who want a subscription must be prepared to wait several months. And this despite high fees for both subscriptions and calls.

Rapid expansion

"Ericsson's system went into operation in 1989. The first year the increase in num-

ber of users was small but in 1992 there was a rapid expansion. Today our system has 32,000 users after the two increases that took place," says Jim.

Negotiations on further expansion are taking place.

In Jiangsu province so-called final acceptance of Ericsson's mobile telephone system came at the end of last year. Here too, there are two systems, one from Ericsson and one from Motorola. Jiangsu, with the city of Nanjing, is one of the "key provinces" in eastern China. Both Ericsson and Motorola each has its joint company in the city, where economic growth is very high.

One Ericsson

Perseverance and team-work are words that Jim stresses when he talks about the job in Shanghai and eastern China.

Nanjing Ericsson in brief

Nanjing Ericsson Communication Company Ltd. started operations in September '92. It is owned 52 percent by Ericsson, 45 percent by Nanjing Radio Factory and three percent by Yung Sing Enterprise Company. Nanjing Radio Factory is part of the large Chinese Panda concern. Ericsson has operational responsibilities for the joint company.

"For the organization to run smoothly we must all work together. It is not only to customers that Ericsson must appear as one company. Internally too among fellow-workers from different parts of the company there must be one Ericsson."

Perseverance important

"In China they do business in another way. It is both exciting and challenging and not a day goes by without my learning something new. It is necessary to be perseverant."

"Incidentally," Jim adds, "here in China it calls not only for perseverance, but the two other Ericsson value words, professionalism and respect, also fit in very well."

Gunilla Tamm



Jim Gill is marketing manager at Nanjing Ericsson Communication Company. He previously worked with Ericsson in New Zealand.

Gunilla Tamm

Foreign visitors should feel welcome

Welcome to Ericsson in Sweden. It can be exciting to leave one's own country to live in another but it can also be very trying. Guest Service Center at LM Ericsson in Sweden must facilitate matters for foreign customers or colleagues that come here. They support and attempt to give an introduction to what it's like to live in Sweden.

"We must take care of our software, that is to say people," says Maria Barck-Holst from Guest Service Center in Stockholm.

Guest Service helps three categories of visitors from abroad:

- Customers who are in Sweden for training.
- Ericsson employees who are here for training.
- Ericsson employees who are in Sweden on short- or long-term contracts.

"It's not enough that we have an entirely different culture from that of our visitors, but for those who are here for a prolonged period they have to quickly get into our taxation, accounting and health insurance systems as well as making contact with schools and other institutions," says Maria. "We try to help our visitors with these matters and to get them acclimatized as fast as possible."

Guest Service has good contacts with the Swedish authorities and helps with things like residence and working permits.

Building trust

The first day Guest Service gives a short introduction – "survival information."

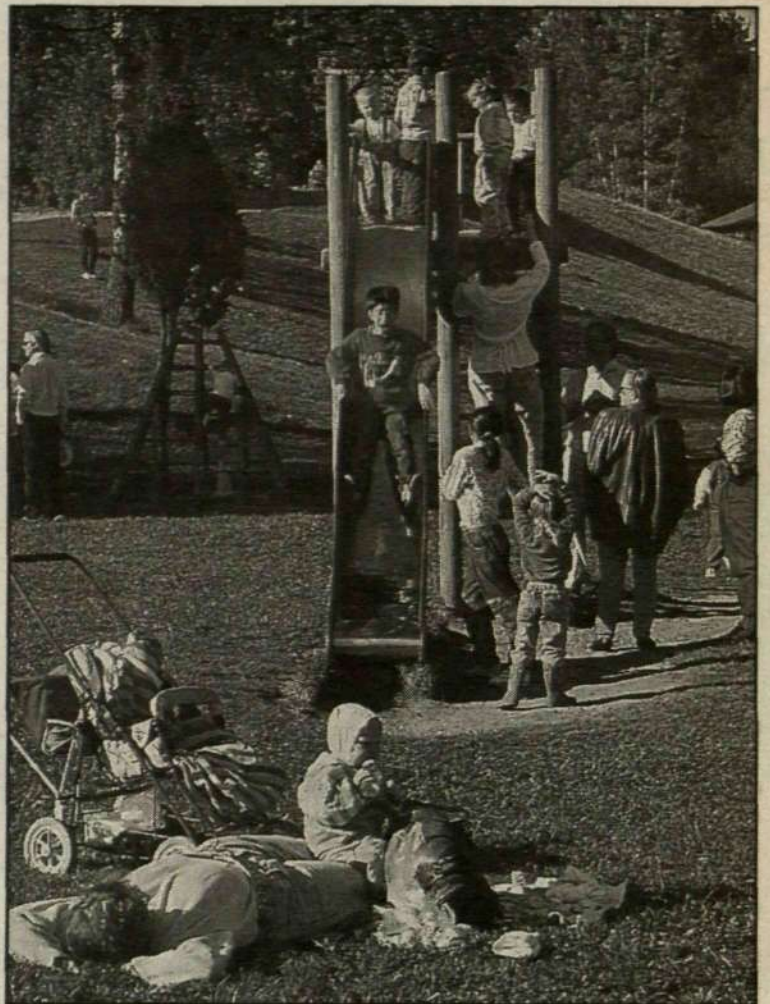
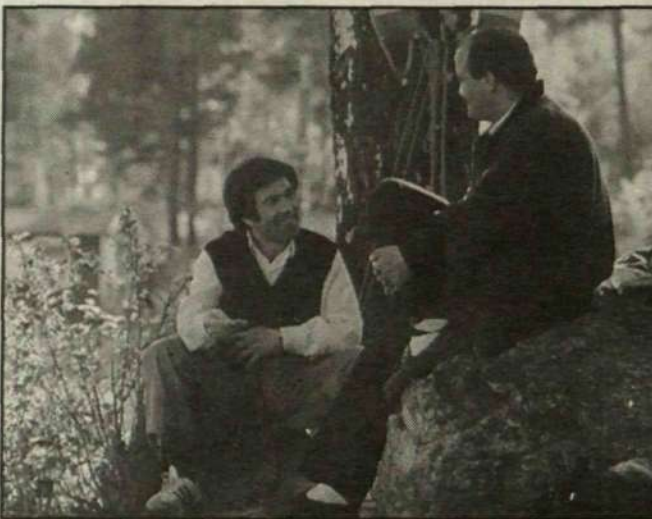
"Many are tired after their trip and it comes down to giving them absolutely necessary information and establishing good contact and trust so that later on they can contact us when they need help or advice," says Maria.

Guest Service then helps with Swedish courses, interpreting assistance, information about Sweden, etc.

"We also give personal advice. That can be everything, ranging from engagement, marriage, divorce and death to straightening out misunderstandings."

Music unites

Guest service arranges guided bus tours around Stockholm. In addition, it arranges



A SMOOTHER WAY INTO SWEDISH SOCIETY. Guest Service Center has the task of making foreign colleagues and customers feel at home in Sweden. In order to give as full a picture of Sweden as possible they arrange a number of different types of events – everything from Lucia and Midsummer celebrations to theater evenings.

meetings where everyone can attend, regardless of nationality.

"What unites all people? Music. Whatever language you speak, music transcends all boundaries. Thus, music evenings are often arranged, which have become very popular.

"It's fun being at these music sessions; many bring their children with them who gleefully dance and sing. Colleagues from all over the world present and invite others to share in different cultures."

Sixty countries

The number of foreign visitors vary per month. For example in January Guest Service took care of 316 foreign customers and Ericsson colleagues from sixty countries. Of these, 87 had their families with them, an additional 186 persons.

"We try to show a many-faceted picture of Sweden as possible and offer different types of events such as skiing, theater, Lucia celebrations, etc.," says Maria.

Every month meetings are arranged for family members, so that they too can establish a contact network and get support and information.

Help with declaration

Most certainly do not long to fill out tax declarations. Think that as a foreigner you have to confront all these forms, and in a foreign language yet. Guest Service has translated the declaration forms into English.

"To my knowledge we are the only ones to have done that. Everyone should have the possibility of filling out his own declaration and most of those who stay long enough that they have to file a declaration in Sweden can speak English. We try to encourage "help through self-help."

Guest Service also helps when it is time to return to the home country, as well as "after work," such things that are left outstanding after the visitor has returned.

How does the customer or a new fellow-worker get in touch with Guest Service?

"Regarding customers, it is for the marketing people here at home to contact us before the visitor arrives. In other cases it is

normally the manager or personnel officer that sets up the contact."

"Does it cost anything?"

"We have a registration fee. Then you pay depending on the length of stay."

Several Guest Service units

Guest Service Center at LM Ericsson in Sweden is, so to speak, the spindle in the network. There are also units in other companies, both in Sweden and abroad, that deal with the same matters.

"We have started network seminars with participants from various Ericsson companies in Scandinavia. They revealed that there are many in the organization that we do not know, who work with Guest Service issues. Now, collaboration among those working with Guest Service in Scandinavia, will be improved."

"If we can collaborate, share experiences and learn from each other, we can avoid duplicating work and save costs. The next goal is to establish a global network. But we have to take one thing at a time. In the first instance, it is our foreign guests that matter."

Joséphine Edwall



Respect and that foreign customers and Ericsson colleagues are happy in Sweden are top priority for Maria Barck-Holst at Guest Service Center in Stockholm.

Multimedia for Hungary

Ericsson Messaging System has signed a contract with the Hungarian operator Westel 900 to install the multimedia platform MXE.

This platform deals with, among other things, messaging of text, data and fax. The MXE system will be delivered in connection with installation of a GSM network.

The system will offer services in the form of short messages and voice mail from the same integrated platform and initially will serve about 20,000 users in Budapest.

Hungary is the first country in Eastern Europe to install a digital mobile telephony system. Now it is time for the first multimedia system to be installed.

Mexico buys SDH

Ericsson's subsidiary in Mexico, Teleindustria Ericsson S.A., has won an order worth 135 million kronor from Teléfonos del Noroeste, Telnor.

The contract calls for modernizing Telnor's tele network in Baja California. The order covers supply and installation of the new generation of a SDH fiber optic transport network, AXE sys

tem and a system for operating and supervising the network. Introduction of the new SDH technology, Synchronous Digital Hierarchy, means that capacity in the tele network will increase by about ten percent. Moreover, operations security will improve markedly. The equipment will be installed during the period from January to September 1994.

The network that spreads good ideas around the world

There are many good ideas for improvement all around Ericsson that can be made better use of. Now these are being gathered up, put together and spread through a global network, "Systems Management Network." Responsibility for gathering up the ideas rests with core unit Basic Systems in Ericsson Telecom.

Ericsson's customers continuously come up with new demands and requests for improvements. We have to be sensitive about these and look for improvement possibilities all the time.

"Suggestions for improvements constantly come up all around the organization. The problem is that many ideas are not taken up in a systematic way in our organization," says Svante Bergqvist, systems engineer at core unit Basic Systems.

Network increased

Some years ago Basic Systems started a global network, Systems Management Network, whose mission, among other things, is to work with systems improvement. Now the network will also take up ideas that can improve properties of the AXE

system and give it better diffusion.

From the start of the year Svante Bergqvist has been responsible for this. Together with representatives from various subsidiaries and business units in the organization he will see to gathering ideas for improvements, collecting and evaluating them, so as to later make a decision about implementing the most applicable.

Suggestions can come directly from individual employees or from different development projects in the group. It can be anything, from a newly-hatched idea to a finished concept that is already in use somewhere else in the organization.

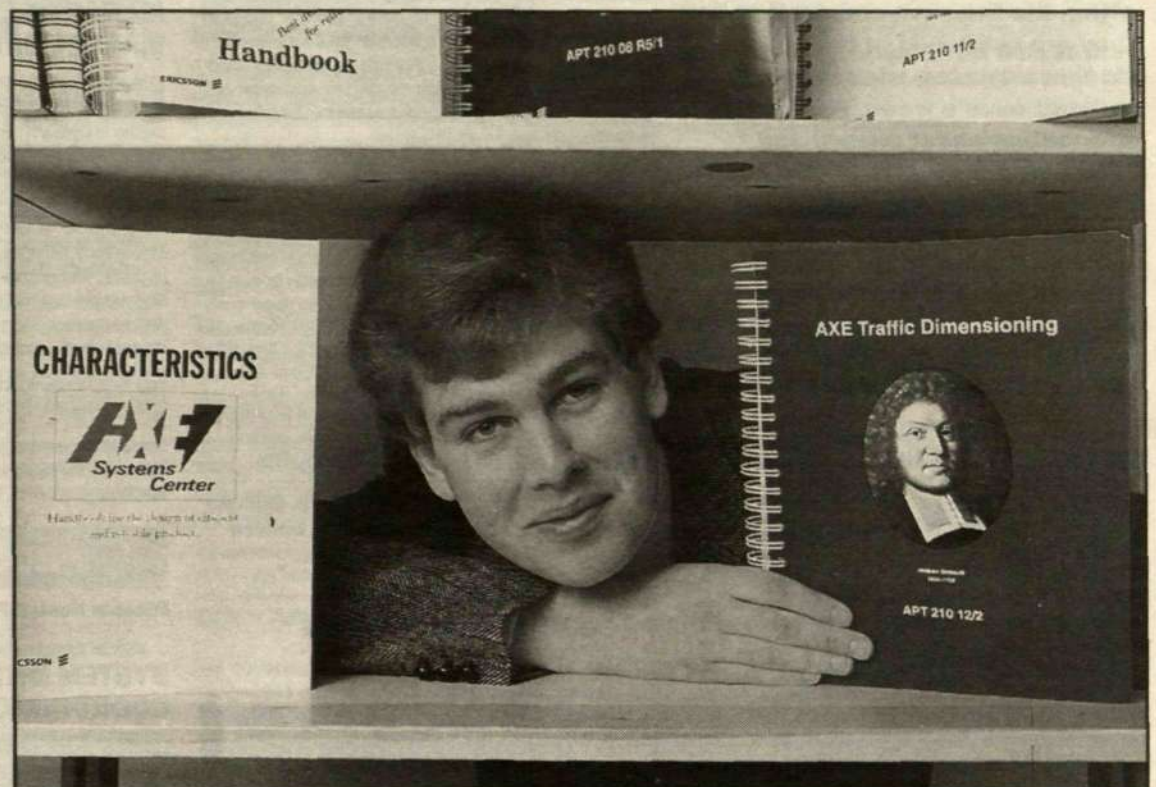
Makes a list

The Systems Management unit which, among other things, works with systems guidance in the core unit Basic Systems, examines suggestions and makes up a list. The list is sent to different interest groups that ranks the suggestions.

A steering group in the network then decides, based on the priority desires of the interested parties, which suggestions will be acted on and become improvement projects.

Many good ideas

What determines whether an idea is good or not?



PRODUCING HANDBOOKS: The network "Systems Management Network" produces among other things handbooks that support development and handling of the AXE system. Now Svante Bergqvist gather up improvement ideas that would raise AXE's quality even higher.

"That is a question of determining which ideas customers have most need of," says Svante Bergqvist.

If a suggestion is to become an improvement project depends on customer need, use of the idea, costs/profit and resource availability.

There are other networks in the group that also work with global

gathering and spreading of improvement ideas. The AXE Software Test & Engineering Committee, is one committee that is responsible for methods, assistance and training in AXE.

"We have looked a lot at how they work and we are using similar work methods," says Svante Bergqvist. "There are good ideas in Ericsson, it is "only" a ques-

tion of locating, spreading and implementing them."

If you yourself have a good suggestion on how we can improve AXE's qualities, would you like to know more about the network?

Contact Svante Bergqvist, tel: 08-719 4064, memo: ETX.ETX-SIPMN.

Joséphine Edwall



DISTINGUISHED GUEST FROM SPAIN. Lars Ramqvist and Candido Velazquez meet to discuss telecommunications of the future.

Spanish delegation

A huge delegation from the Spanish operator Telefonica visited Ericsson in Sweden at the end of January and beginning of February.

Ericsson's Spanish subsidiary was host and among the visitors was Telefonica's president, Candido Velazquez.

"Collaboration with Telefonica is very significant for Ericsson. Hence we wanted to invite

them to Sweden to discuss our common tasks," says Roman de los Martires, director of Ericsson in Spain.

During the tour, the visitors met among others Lars Ramqvist and Jan Stenberg from Ericsson's Executive Committee and Raimo Lindgren, Ericsson's president in Spain.

Ericsson and Telefonica have been working jointly for many years. The meeting was arranged to stress and strengthen this collaboration.

A real lightweight

Ericsson's new mobile telephone NH237 is the first real pocket phone for the NMT 900 system. It is not only smaller and lighter than any other NMT phone, it is also easy to use and has several accessories.

NH 237 belongs to Ericsson's new generation of pocket phones. Last December models for the analog systems ETACS and AMPS were launched, which means that the family is now complete as regards the world's largest analog mobile telephone system.

NH 237 is only 13 cm long and weighs 200 grams with standard battery. (These figures do not say everything. You must see the phone itself in order to understand how compact it is). Talk time is one hour and 10 minutes.

Activated by voice

With the phone comes a novelty that can increase traffic safety. When you have hands-free installation in the car, you have a



SMALL AND LIGHT. NH 237, the new NMT Handy has a length of 13 cm, and a weight of 200 grams.

standard so-called voice-activating function.

When the phone rings the driver can answer with, for example, hello and then continue the conversation, all with free hands, without moving them from the steering wheel.

Also new is that all necessary functions can be grouped in a specially developed installation kit for cars. In a soft rubber hol-

der there is the speaker, the connection for hands-free function, current supply and automatic battery charging.

Another plus also is that the phone can be run on environment-friendly batteries. These are nickel-metal hybrid batteries that do not contain any cadmium and that moreover give better performance.

Lars C.

VACANCIES AT ERICSSON

This is a selection of vacancies within the Ericsson corporation. They are published in the electronic News system, which is being updated once a week. For further information about advertising here, contact Birgitta Michels at Ericsson Events, HF/LME/A. Phone +46 871924 18.

ADMINISTRATION

HF/ETX/VB - Ericsson Telecom AB,
Telecom Standards & Regulations

INFORMATION COORDINATOR

Information previously available on paper only is now increasingly available also in databases and on CD-ROM. We are looking for a person to be the focal point for the information provision which implies responsibility for organising and supporting the best possible info supply to expert in all Ericsson cities engaged in standardisation and regulatory matters, building, maintaining and supporting libraries/databases, regularly distributing printed and electronically stored info, maintaining a database on Ericsson staff engaged in telecom standards organisations, performing info retrieval/search in databases/libraries on request from technical experts, represent Ericsson's Requirements on EDH in the telecom standardisation area towards external organisations etc.

You have a good working knowledge in English and some experience from library/information services and database search/retrieval. Knowledge of telecommunications and standardisation are additional qualifications.

Contact persons: Björn Troili, 08-7190906, ETXBTI, Tom Lindström, 08-7195338, ETXTOMI and Kerstin Halén, personnel, 08-7192054, ETXKER.

MARKET

Ericsson Radio Systems, Market Ops USA, Kista

STAFF

We are about to launch a new dynamic marketing in Kista - Market Operations, North America - that will be handling PCS in Dallas, Texas, USA. Personal Communications Services (PCS) is a new market for Ericsson in the USA. Its purpose is to give end users total mobility and a wide variety of services, and offer these advantages at a low price. Beginning in mid-1994, PCS licenses will be auctioned off to companies and consortia who wish to compete with existing services, such as mobile or conventional telephony. Thanks to this exciting new development, Ericsson sees a great opportunity to strengthen its position in the USA.

Today, we are looking for people who want to "get in on the groundfloor" by joining the team that will build up and lead this new unit. Specially, we are seeking staff who are familiar with line organization economy, technical sales support, marketing, project management, implementation and logistics.

These assignments require not only creativity, but the ability to take the initiative. In addition, the candidates will possess clear-cut skills in communication and problem-solving, as well as a good command of written and spoken English. We are also looking for people who might be interested in working in the USA at some future time.

Contact: Håkan Enquist, 08-7572240, Tomas Mikaelsson, 08-7571148, Pär Lövgren, 08-7570070 and Gogo Landén, personnel, 08-7572242.

Ericsson Mobile Communications AB, Kista

MANAGER LAND MOBILE RADIO MARKET OPERATIONS IN CHINA

The unit will be responsible for orders, sales, contract execution, after sales support and repair of Land Mobile Radio products in China. The customers are private/public enterprises and organisations mainly within the following market segments: Emergency services, police, utilities, large industries, airports. The products we offer are highly competitive and are market leaders when it comes to functionality and capacity. Sales is done both via direct sales and independent distributors.

You need experience from marketing and sales in Far East, preferably from operations in China.

Contact: Staffan Svensson, 08-7570761, Memo ECSSNS or Craig Szczutkowski, EGE, Lynchburg, +1 8045287382, Memo EGECSFS.

INTERNATIONAL ASSIGNMENT - CHINA

MARKETING ENGINEER - GUANGZHOU

The marketing engineer will market TACS and GSM systems in the Guangdong province. Main tasks: Independently participate in preparation of tenders, carry out technical and commercial presentations, independently negotiate and finalize agreements, work out proposals for marketing strategies and carry out these, prepare budgets and forecasts, initiate projects through hand-over meetings. The marketing engineer should have relevant technical or commercial education and preferably experience within switching or cellular systems and its products and application. Experience of GSM system is desirable. General knowledge of business law, business ethics, finance and experience of Asian business culture are other requirements as well as good command of the English language. The successful candidate will be offered minimum one year of assignment with family or as single status.

Contact persons: Leif Ohlstenius, + 86 (0) 2075098 06, fax +86 (0) 207509810 alt. Hans Falk, personnel, 08-7571402, 08-7571140, Memo ERAHFA.

KX1/ETX/A/MM - Ericsson Telecom AB, Markets and Operations Asia, Africa and Latin America

MARKETING SWITCHING PRODUCTS - MIDDLE EAST

We need to strengthen our marketing organization in the area of switching. The unit, Product Marketing (A/MM), should provide a professional marketing resource. We support the market managers and local offices across all of Middle East, with customer presentations, tenders and other marketing activities.

SENIOR SWITCHING MARKETER

You will be responsible for the long term marketing strategy for switching in Middle East. You will also independently make customer presentations, tender work and other marketing activities. As the unit's main authority on switching you will support other people working with switching. You should have a thorough background in telephony and the AXE system with several years at Ericsson.

SWITCHING MARKETER

You will independently or as a part of a team make customer presentations, tender work and other marketing activities. You should have some experience with the AXE system with at least two years at Ericsson.

For both positions an outgoing personality and good knowledge of spoken and written English is required.

Contacts: Bo Nilsson, 08-6812878, Memo ETXBO-NIL, Lennart Kalling, 08-7192374, ETXLKG and Stefan Mogel, personnel, 08-7196941, ETXMOGS.

KK/ERA/L - Ericsson Radio Systems AB, Mobile Telephone Systems GSM, NMT, TACS

GENERAL MANAGER MARKET OPERATIONS - CHINA, HONG KONG, MACAU (RMOG)

You should be responsible for all our activities within Market Operations, Project Management within above mentioned Business Unit. It is a complete Bottom line responsibility. Our business is under great expansion and now including two production units. You will be stationed in Kista where you will be a Manager for about 30 persons. The position also includes to be a Member of the Board within our Joint Venture Companies. There are about 300 employees within the unit stationed in China, which will expand to 700 during 1994.

The business includes different parts like marketing, operations, production and product management so you must have a wide and solid experience.

Contact persons: Eva Andreassen, 08-7570908, Memo ERAEA and Kjell S Andersson, 08-7570557, ERAKSA.

INTERNATIONAL ASSIGNMENT - CHINA

MARKETING MANAGERS

We need to recruit Marketing Managers both to our headoffice in Beijing as well as to our Regional offices in Dalian, Guangzhou and Shanghai. Main tasks are Preparation of market plans for China, Independently lead preparations of tenders, Carry out technical and commercial presentations, Independently negotiate and finalize agreements, Prepare budgets and forecasts.

The Marketing Managers must have relevant technical education and experience within switching, transmission and network management products and applications, together with minimum five years experience in international marketing. General knowledge of business law,

business ethics and finance are other requirements as well as good command of the English language. The successful candidates will be offered minimum one year assignment with family or as single status.

Contact persons: Stefan Johansson, +86 1 5051190, Memo ETXSBJ, Magnus Ask, 08-7197481, EBCMASK and Lennart Haellkvist, +86 1 5051190, ETXLTH.

KI/ECS/R - Ericsson Mobile Communications AB

MANAGER LAND MOBILE RADIO MARKET OPERATIONS CHINA

ECS/Land Mobile Radio International is looking for a Manager Market Operations in China. The position is based in China. The unit will be responsible for orders, sales, contract execution, after sales support and repair of Land Mobile Radio products in China. The customers are private/public enterprises and organisations mainly within the following market segments: Emergency services, police, utilities, large industries, airports. The products we offer are highly competitive and are market leaders when it comes to functionality and capacity. Sales is done both via direct sales and independent distributors.

You need experience from marketing and sales in Far East, preferably from operations in China.

Contact persons: Staffan Svensson, 08-7570761, Memo ECSSNS and Craig Szczutkowski, EGE, Lynchburg, +1 804 5287382, EGECSFS.

PROCUREMENT

Ericsson Hewlett-Packard Telecommunications

SYSTEM INTEGRATION COORDINATOR

EHPT Supply Unit Mission is to deliver integrated TMOS solutions in a flexible and cost effective manner. Lead supply and related processes reengineering to enable a five times increase in sales volumes over the next two years with drastic productivity improvement. Influence EHPT strategies and tactics to make TMOS the no 1 Network and Services Management System. We have now an open position with the responsibility to procure components necessary to make system integration on the SUN Platform. The tasks will be hardware and software procurement from SUN, export licence handling, software licence handling, preparation of shipping documents and internal invoicing.

Candidates will have experience from purchasing and shipment on international market. Are you self sufficient, capable in working in a dynamic environment and well organized? Fluent in English?

Contact: Mats Jonsson, 33-7662 4528, Memo EHSMJN or Anette Oké-Brådman, 08-7198287, Memo EHSOAKE.

PRODUCT MANAGEMENT

N/ETX/LL/NA, Product Management & Market.

ASSISTING PRODUCT MANAGER Product Area System Terminals

System Terminals is a new area within Local Switching Systems. Our job is to make sure that Ericsson has complete product offerings including CPE-products (Customer Premises Equipment). We cover an area of CPE-products from analogue telephones to Broad-band multimedia terminals. We source products both internally and externally. Our responsibility also includes strategy and coordination regarding terminals-telecom network interaction. We therefore monitor CPE trends and their influence on the telecom network and initiate necessary activities. You will assist in strategic planning and follow-up within the product area, initiating and participation in OEM/partner discussions and activities, be responsible for one or several OEM projects, take active participation on related projects steering committees, assist in customer discussions and marketing activities.

Technical and commercial know-how and experience regarding terminals or similar, Datacom and PC know-how, and an active technical understanding and interest, sourcing know-how and experience, good ability to cooperate, identify, initiate and follow-up needed activities.

Contact persons: Lars Janson, 08-7190084, Memo ETXLSJ and Ingemar Brattgård, 08-7193886, ETXINBR.

TN/ETX/LG/V - Ericsson Telecom AB, Gateway Switching Systems

PRODUCT MANAGERS

Strategic product planning at BU Gateway combines product and business development, allows cross BA contacts, gives the opportunity of working on high level and the freedom to work internally and externally. We are looking for two product managers to work within the

areas of Intelligent Networks and Applications. The main objective is to formulate the product strategies for BU Gateway in the areas. The tasks include market and competitor analysis and examinations of leading customers and MLC/MOs strategies. The work involves setting guidelines for standardisation work, general use of new system platforms and concepts and frequent contacts and negotiations with potential partners.

We would like you to have knowledge of the telecom industry, the Ericsson organisation and its decision making process. You should have experience of customer contacts and profitability analysis. You initiate and pursue goals, act independently and communicate effectively. Take the initiative and contact us for a stimulating work with many opportunities!

Contact persons: Nael Salah, 08-7195590, Memo ETXNAEL, Kjell Persson, 08-7191767, ETXKPN and Magnus Karlsson, personnel, 08-7199404, ETXMAKN.

TN/ETX/LG/V - Ericsson Telecom AB, Gateway Switching Systems

PRODUCT MANAGERS

You will be offered great opportunities to gain a wide telecom market knowledge, broad competence in advanced telecom applications and good insight in Ericsson decisions process. You will become a key contact in a worldwide Ericsson contact network. We are looking for two well-skilled and high potential individuals willing to work in key positions. The position implies responsibilities and authorities to secure and maintain Ericsson's world leader position in the area of IN.

Your technical background should be very good telecom knowledge, basic AXE competence and good knowledge in IN. You should be open-minded and communicative and like being the initiator.

Contact persons: Thomas Giarimi, 08-7196871, Memo ETXTHGI, Kjell Persson, 08-7191767, ETXKPN and Magnus Karlsson, personnel, 08-7199404, ETXMAKN.

QUALITY

EDD/Ericsson GMBH, Business Unit Mobile Telephone Systems GSM - Germany/Düsseldorf

QUALITY SUPPORT SPECIALIST (Expatriate contract)

The Customer Support Services Department at ERICSSON GMBH in Duesseldorf is responsible for first line support towards Mannesmann Mobilfunk in all after sales questions on products in service for CME 201 (GSM) SS, BSS and OSS. Main tasks of the job will be to actively define, communicate and follow-up quality goals for the network in order to enhance In-Service-Performance (ISP), develop concepts for measuring and presenting the quality goals, actively assist and participate together with other Ericsson units in developing Service Reliability Reviews, actively perform SRR's and report problems to relevant units in order to correct them, provide competent technical support on "Quality Issues" to other units within the department and towards our Customer MMO. In this position you will report directly to the Department Head Customer Support Services.

Your work location will be Duesseldorf.

The ideal candidate for this position should have completed university degree in electronics (telecommunications), 6-7 years of relevant experience within telecommunication or computing industry, thereof 4-5 years on relevant platform supplied by Ericsson (AXE or SUN/UNIX), proven ability to analyze and solve complex technical problems, good overall knowledge of CME 201 (GSM), team-work oriented, fluent in written and spoken English, German knowledge would be a benefit but not an asset.

Contact persons: Kent Jakobsen, Memo RFDKJ and Dagmar Kuhnen, personnel, RFDKJ.

TECHNOLOGY

ENGINEERS TO JAPAN

Support Experts required with experience in the following areas Trouble Shooting, Trouble Report Handling, Testing of AXE software packages such as AC-A, CNA, New AS's. We are looking for people with initiative and long previous experience, preferably with cellular systems.

Contact: Dan-Erik Grobecker, 08-7641056, Memo ERADG.

Ericsson Radio Systems AB, Kista

UNIT MANAGER SOFTWARE DEVELOPMENT

Within business unit RMOA we are looking for a manager to a growing SW development unit targeting a

total of about 30 people by the end of this year. This unit is one of three parallel units designing CMS88 base station control applications software. Target systems range from microprocessors up to AXE 10 CP. The organization is very strictly divided between projekt and line management which means this job has it's emphasis on competence development, resource management and methodology. As the overall SW development unit is very dedicated to ESSI program for quality and productivity improvements a mayor task during the coming year will be to plan and implement changes on our working standards.

To do this it is essential that you already have experience and an established view on management and organization of large design operations.

Contact: Lars Bondelind, 08-7641286 or Karin Enberg, personnel, 08-7641786.

ECT - Ericsson Communications Thailand Ltd.

SYSTEM SUPPORT ENGINEERS

Ericsson has recently been selected as supplier for a GSM-system in Thailand which will be implemented in two phases during the first half of 1994. In addition Ericsson will during the first quarter of 1994 supply new NMT 900-exchanges into the existing NOKIA 900-network. For both systems AIS (Advanced Info Service Public Co. Ltd) is the operator. For this reason our company in Thailand (ECT) requires three system support engineers for long term contracts (min. one year) with start from mid January 1994.

1. GSM - MSC/OSS SYSTEM SUPPORT ENGINEER

Minimum two years of experience from GSM and handling of OSS is required. The position comprises close cooperation with the customer in order to solve problems in the MSC-software and DT (Data transcript).

2. GSM - BSS SYSTEM SUPPORT ENGINEER

Minimum two years of experience from BSC/BTS (either design, installation test or support) is required. The work includes except from system support also handling of DT (Data transcript).

3. NMT 900 - SYSTEM SUPPORT ENGINEER

Minimum two years of experience from NMT (support or development) and knowledge of CCITT 7 in NMT-

systems is required. The position involves close cooperation with the customer and comprises system support activities such as TR-handling, consultancy, correction handling etc in cooperation with PEM in Malaysia (Application System responsible).

If you are interested in applying for any of the positions please send your resume/C.V. to memoid:s ERA.ERAJAL and ERA.ERAKEJO.

Ericsson Telecom AB, Access Products, Tellus

THREE OPERATIVE PRODUCT MANAGERS FOR THE NEW ACCESS NETWORKS

At System Provisioning Access Network (SP-AN) we are responsible to provide a competitive range of network access products. Our field is rapidly expanding due to the coming of standard interfaces and to the introduction of new techniques and system solutions. The access network has now copper, fiber and radio in the local loop. We need to expand our competence in Fiber, Broadband & New Services and Network Accesses.

You are expected to be the link between market and technique. You will actively collaborate with LL/A Product Management in analyzing the need of new products, working on the definition and validation of requirements and on customers support. Together with the System specialists in SP-AN and the other OPMs you are expected to start investigations on new products, keep contacts with our subsidiaries and with external companies and define the development plans for your area.

Contact: Anders Samuelsson, Memo ETXASAM, Franz Hrdlicka, ETXHRDL or Teresa Vallin Hulth, ETXTVH.

Ericsson Hewlett-Packard Telecommunications AB, Västberga

SYSTEM INTEGRATION ENGINEER

We are looking for an experienced, qualified and enthusiastic person who will be responsible for Manufacturing Specifications, Plant Specifications, Manufacturing Instructions and Support of Integration Center.

Qualified applicants should have Bachelor or Master Degree in Computer Sciences or equivalent, around 5 yrs exp with SUN Unix computing, Networking and

TMOS products. You are confident in fast changing environment, have good communication skills and you are well organized and fluent in English.

Contact: Jean-Pierre Dinet, 33-7662 4527, Memo EHSJPI or Anette Oké-Brådman, personnel, 08-7198287.

KI/ERA/LZ/S Ericsson Radio Systems AB,

Business Unit RMOG

MANAGER ESO (ERICSSON SUPPORT OFFICE) MOBILE TELEPHONE SYSTEM CME201

A position as manager for customer support (ESO) is open. The unit has presently about 20 people and is situated i Kista. It is responsible for customer support for AXE for a number of markets in Asia. The support office carries out verification of the application systems which are then delivered to the customers. Introduction of new function packages, correction packages and emergency support are other important activities. The work is carried out using our own test plants.

The candidate should have good experience of AXE testing or support preferably also from working in contact with customers abroad. You must be able to speak swedish as well as english. Importance is given to the ability to lead people and build team spirit. The position will give you good possibilities for your own professional development. You will have extensive contacts with the design organisation as well as with daughter companies and customers.

Contacts: Ingema: Rang, 08-7571761, Memo ER-AIRG and Mats Ulfgren, personnel, ERAMUN.

TN/ETX/LG/TU - Ericsson Telecom AB

TECHNICAL CO-ORDINATOR (Project system manager)

As technical co-ordinator (Project system manager) at Business Unit Gateway you will have an important role in the BM ph3 project, which will provide our product portfolio with a "state-of-the-art" International/National Switch. You will be responsible for the system analysis up to TG-2 and the technical co-ordination and system issues during the development phase of the project.

SYSTEM DESIGNER(S)

As system designer at Business Unit Gateway you will have an important role in the BM ph3 project, which will provide our product portfolio with a "state-of-the-art" International/National Switch. You will perform and monitor complex system study/system analysis tasks in the system study and system analysis. One position is for AM system issues and one position is for capacity and "New GS" related issues for our application. For the "AM position" AM experience is required.

You will have an excellent opportunity to gain competence and extend your contact network and you will work in a dynamic and stimulating environment. The BM ph3 project will as well as ISDN functional additions include the new Groupswitch, major capacity improvements (APT and APZ), AM adaptations and major charging-off-line/IO improvements.

Contact persons: Anders Blomgren, 08-7190473, Memo ETXASB, Per Öberg, 08-7195412, ETXPOEB and Magnus Karlsson, 08-7199404, ETXMAKN.

INTERNATIONAL ASSIGNMENT - CHINA.

For our expanding business in the Peoples Republic of China we urgently need to recruit a number of

SUPPORT PERSONNEL

A number of positions are available within the Ericsson Support Office (ESO) in Beijing and the three provincial Field Support Offices (FSO) in Guangzhou, Shanghai and Dalian. The total Support organisation will for 1994 consist of some 150 persons of which 60 are expatriates. We have today installed nearly two million local AXE lines as well as 60 Mobile systems with a capacity for 500.000 subscribers. More than two million additional lines will be installed up to the end of 1994 together with an additional 60 new Mobile systems.

The candidates for the different support positions should have 4-5 years experience in AXE based system such as local, Gateway OPS or MTX, proven ability to solve complex technical problems, able to work under pressure and in changing environments maintaining the Ericsson value, good knowledge in procedure/methods for AS/CN-A/AC-A and ASR activities, fluent in written and spoken English.

Contacts: Gun Johnsson, 08-7190185, Memo ETXUNAR and Hans Falk, 08-7571402, ERAHFA.

Courses 1994

Active Quality

the driving force behind a successful TQM program
February 7-11 (Swe), March 14-18 (Eng), April 18-22 (Swe), September 19-23 (Swe), October 24-28 (Eng), November 28-December 2 (Swe).

Improvement Projects and the 7 Management Tools

March 2-3 (Swe), June 2-3 (Swe), September 27-28 (Swe), November 21-22 (Swe).

The European Quality Award self assessment

March 21-23 (Eng), October 31-November 2 (Eng).

Ericsson Quality Auditing

April 25-28 (Eng), September 27-30 (Swe), December 6-9 (Eng).

Design of Experiments

basic course
April 12-15 (Swe), November 1-4 (Swe).

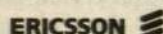
Statistics 1

basic course
February 22-25 (Swe), May 17-20 (Swe), September 13-16 (Swe), October 18-21 (Swe).

Apart from these open courses, where people from the whole Ericsson group come together, we also offer about 20 courses that are tailor-made, provided on your request. Please contact EQI for further information!

Ericsson Quality Institute

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P.S. Ericsson had enough confidence in Dustcontrol AB to let us install a vacuum cleaningsystem for the clean room at their new microchip production facility in Kista.



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Welcome from Teli to Ericsson!

The parts of the Teli group that Ericsson took over from Telia AB in the fall of 1993 become, as of the beginning of the year, three companies in the Ericsson group. Ericsson has gained new colleagues, who are now heartily welcomed.

"This means 'win, win, win,' for Ericsson in its entirety, for the fellow-workers who are coming from Teli and for our big customer Telia," says Torbjörn Andersson, who is responsible for coordinating the three companies.

"Together we shall work to have satisfied customers, efficient operations and a pleasant job atmosphere for all of our employees," says Torbjörn Andersson.

Two of the companies go into Business Area Public Telecommunications. These are Ericsson Telecom Sweden AB and Ericsson Emergency Control Systems AB.

Ericsson Telecom Sweden AB consists of the former Teli AB, Teli Telecom AB and parts of Teli Business Systems AB.

President of the companies, which are located in Nynäshamn, Älvsjö, Gothenburg, Vänersborg and Sundsvall, is Torbjörn Andersson. He belongs to Ericsson Telecom's business management where he works with marketing and business coordination. In addition, he is responsible for Scandinavia in Ericsson.

Ericsson Emergency Control Systems AB is made up of the former Teli Mobile Systems AB. President is Lennart Nilsson, who comes from Teli. The company is located in Gothenburg.

The third company, Ericsson Anslutning System AB, comes under Business Area Business Networks. This company consists of the former Teli Anslutnings System AB, with Peter Heedman as president, who comes from Teli. Ericsson Anslutningsystem is located in Skellefteå (Read more about the company in the accompanying article).

What happens now?

At present about ten people are working just about fulltime in a "core Team" with integration in the Ericsson group, under the leadership of Torbjörn Andersson.

What happens next?



NEW ARRIVALS IN ERICSSON. Maj-Inger Jonsson at Ericsson Anslutningsystem working with printed board assemblies that will be installed in Telia's telephone switches for blocking out 071 numbers. Photo: Thord Andersson

"First of all we must see that our customers, with Telia the largest, see every change we make as positive. We will get involved in the various activities and integrate them in the best possible way in the Ericsson group," says Torbjörn Andersson.

Nynäshamn will be the base for Ericsson's supply of AXE to Telia and two Design Centers will be set up in Nynäshamn and Vänersborg.

Ericsson Emergency Control Systems AB, as an example, develops and manufactures advanced alarm systems for Securitas and SOS Alarming AB.

Operations of Ericsson Telecom Sweden AB can be divided into three main areas:

- The marketing unit for Sweden. This will be integrated with the sales unit Sweden (Market Operations Sweden) in Ericsson Telecom.
- Design operations, which will go to business unit Local Switching Systems in Ericsson Telecom.
- Product operations, which will come into Ericsson Telecom's Production unit.

Avoiding interruption

Jan Malm, former president of Teli Telecom and now vice president of Ericsson Telecom Sweden AB, will lead his old management group. Jan knows his people well, thus it is good for him to take care of the operative

side and to see that we supply and invoice customers as usual.

How does this affect operations for Ericsson Telecom's sales unit for Sweden?

"For us it means that we can strengthen our marketing organization in Sweden even more, which can also be an advantage for other business areas. We have had plans for that for some time now. Now we can gather up competence from Teli and from our own unit, Market Operations Sweden and form a very strong, competitive sales unit. Our people have been working for a long time now with Telia and know customers well. Teli's employees belonged to the Telia group, so it couldn't be better," says Bengt Kellgren, responsible for sales unit, Sweden.

Joséphine Edwall



Torbjörn Andersson has coordinating responsibility for the three new companies in Ericsson that made up the former Teli.

Where less is more

Ericsson Anslutningsystem AB is the smallest of the three new Ericsson companies but a really good one at that.

Production flexibility is one of the hallmarks of the company. The most important production centers on different types of fiber optic connecting products, among others for AXE switches, coaxial wiring techniques as well as AXE cabling.

Jacks and outlet instruments and other consumer products are also part of the lineup.

Some subcontracted products, among them advanced printed board assemblies, are also an im-

portant part of operations. For these, the biggest customer is Telia.

"This is a very flexible operation," says Peter Heedman, president since 1990. We can quickly adapt to new production as needed."

"This is a great source of strength for us. We are able to offer Ericsson's world a varied range of real quality products," Peter adds.

The feeling for quality runs through all the activities at Ericsson Anslutningsystem.



Peter Heedman, president of Ericsson Anslutnings System, strives for flexible production and highest quality. Photo: Thord Andersson

At strategic points in the factory and in the offices there are decorative signs with the company's quality policy, quality goals and business ideas clearly spelled out.

Efforts on quality, despite tough competition, have resulted in new, satisfied customers.

The company was the first company in the Telia sphere to be certified according to ISO 9001 during 1992.

This bodes well for continued successful operations.

Thord Andersson

German broadband project grows

Two years ago Ericsson together with the French Alcatel and German Siemens were chosen to run a pilot project where they would supply broadband switches to Deutsche Bundespost Telekom.

Now Ericsson will also join in a second German pilot project in broadband technology, ATM. Deutsche Bundespost Telekom, with an extension order, has ordered a separate network and equipment to link this network with the earlier project.

Apart from Ericsson, two other companies are also involved in the new project.

DECT for Norway

Televetket in Norway made its bid into the personal telephony area where a new generation of telephony services for cordless communications are being tested. Ericsson's DECT-based technology will be used in the project.

Some 230 inhabitants in the town of Forde in western Norway will be part of the project, which is expected to come into operation in April 1994. They will use cordless telephones in a pocket format that offer the same voice quality and functions as cord-bound fixed telephones. Some 160 radio base stations will be installed. Users will be able to move about freely in the test area among themselves without creating any disturbances on the line. Moreover, radio transfer is encrypted to prevent tapping.

Big order from Hungary

A 300 million kronor contract was signed between Ericsson Technica and the Hungarian operator Hungarian Telecommunications Co. The contract is the largest so far for both companies and covers supply of a complete digital tele network for the area of Szekszárd in Hungary. Some 42,000 subscribers are covered by the installation.

About 600,000 AXE lines have been installed or are in the works in Hungary.

Largest NMT-network

The mobile telephone operator Advanced Info Services Ltd. AIS, in Thailand, has ordered radio base stations from Ericsson. The order is worth about 150 million kronor. The stations will be delivered to the country's analog mobile telephone network, NMT 900, which is the world's largest outside of Scandinavia. At the beginning of 1994 some 240,000 subscribers were using the NMT 900 network and the number is growing.

Defense buys communications equipment

Ericsson Radar Electronics in Mölndal received an order worth 200 million kronor from Sweden's Försvarets Materielverk, FMV.

The order covers supply of communications equipment for the Air Force's new system for technical guidance of aircraft.

The order means the start of Ericsson's development of radio links of the future which is built on communications with strong text- and disturbance protection for secure transfer of digital voice and data.

The timetable is tight. It is about one year before the first delivery, and the project has top priority.

"Both FMV and we are aware that it is a tough assignment and that it is important that we show that we can manage it," says president Bengt Halse.

The order is the first in the RAS 90 project, which covers supply and development of prototypes for a subsystem, known as Grundsystem Mark. It is chiefly equipment for ground-based communications between acquisition centers, radio installations, air bases and aircraft on the ground. The RAS 90 system uses a new and larger frequency area than today's system. The technical development possibilities, moreover, are immense, which is needed in order to meet the demands that will be placed on the system of the future.



STRONG ERICSSON MARKET. Ericsson has many years of tradition as supplier of mobile telephones and systems in Thailand.

Thailand chooses Ericsson's GSM system

Ericsson Communications, Thailand, is seen as the main supplier of GSM equipment for mobile telephone operator AIS, Advanced Info Services Ltd. The order is, in the first phase, worth 100 million kronor and includes radio base stations, switch equip-

ment and network supervision systems.

In March 1994 the network in Bangkok will be ready for operation. At the end of the year the more important parts of Thailand will also be covered by the GSM system.

MD110 for Siberia

An oil and gas combine in the Russian city of Nizhnevartovsk, 3,000 kilometers northeast of Moscow, has ordered MD110 and other equipment from Ericsson for a private network. The network is linked to the public Russian tele network and functions as a complement to it.

The order covers the digital business switch MD110, microwave links and fiber optic cable. Deliveries will begin in March. The job is expected to be completed by the beginning of 1995.

Opening in South Africa

The order comes from the mobile phone company MTN, Mobile Telephone Networks. It covers supply and installation of GSM equipment for MTN's nationwide network.

The contract is an important entry for Ericsson on the South African market. The development possibilities for mobile telephony and fixed public telephony are huge in South Africa.

The job will be done by Ericsson Radio Systems in collaboration with Plessey Tellumat SA LTD and is expected to be ready for operations by June 1994.

Ermes for Denmark

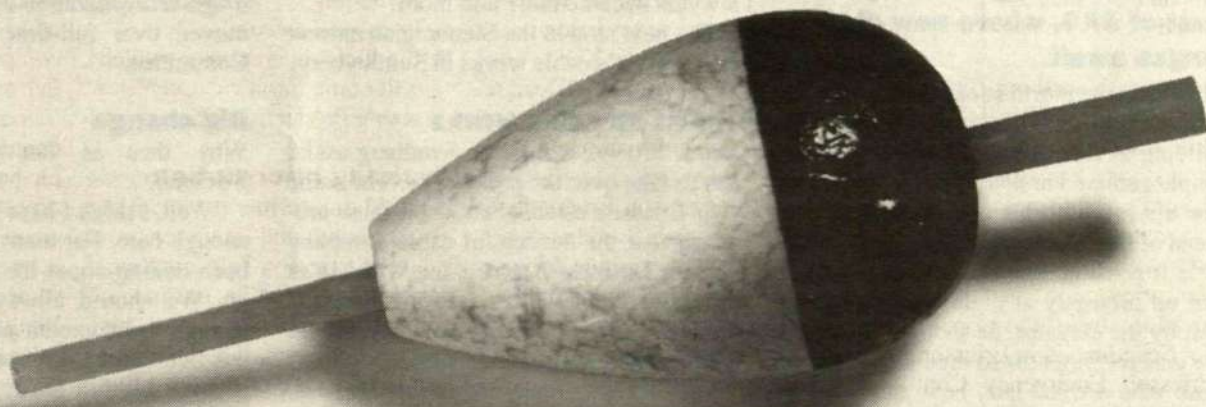
The paging system ERMES will be delivered by Ericsson to Denmark. The contract calls for supply and installation of equipment as well as training of personnel for a nationwide system. Today Ericsson already supplies ERMES equipment for eight different operators as well as a

complete system for four of these.

The European ERMES system is pioneering in the field of paging and text via radio. It belongs to the future Europe standard and is at least as revolutionary as GSM is in mobile telephony.



before



after

Competition is getting tougher. If you add a little extra to your products or services, it might make all the difference to the customer's decision. Or improve the chances for your internal customers.

We will help your organisation identify

those important little extras and even to realize them.

Our support consists of consulting and training and, helped along by the very best international methods, we can, together, improve your products and services,

increasing competition at the same time.

Isn't that something to jump at? If you think so, get in touch with us.

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CONTACT

Ericsson, HF/LME/A, Room 4313, S-126 25 Stockholm

Jan is a guy who always seizes the day



Photo: Magnus Torle

"Ericsson is a company that offers every opportunity for the individual to develop. Those who are not afraid to put their best foot forward can go a long way in the company. Jan Stenberg has 27 interesting years behind him in Ericsson. And now he is taking over as president of SAS, where new challenges await."

At 8.05 on the morning of May 15, 1967, a young attorney stepped into the lobby of D building at Ericsson. There were a lot of people gathered around the elevators. The new arrival, with his first day on the job ahead of him, got a bit scared.

"Is it possible that anyone who did not turn up promptly at eight o'clock had to wait by the elevator, he thought. If someone was coming now to note the names of those who arrived late, how annoying to be on the list the very first day on the job."

Today, almost 27 years later, Jan Stenberg has learnt that Ericsson is not such a rigid company as he thought on the day he turned up for his first job, as an attorney in the auditing department. Jan soon came to the realization that Ericsson actually gives its employees a fair measure of freedom.

So it is not because of his first misunderstanding that through the years Jan has always tried to be on duty at seven o'clock in the morning.

Career in the company

"You should really seize the day at Ericsson. People are rarely limited to their job descriptions. Those who want to take on greater responsibility can actually do so. That's why a lot of employees choose to make their careers with the company."

Jan himself is a good example. When he began as an attorney on the 10th floor in D building there were only two attorneys employed at HF, the head office. After a

couple of years the manager was promoted and Jan took over as head of the department.

In 1976 he was named a director and chief corporate counsel in the company.

"I hired about five or six attorneys as corporate legal work expanded. Top management began to realize that it was beneficial to have lawyers at hand when contracts were to be signed, and in this way lawyers became more and more."

The next stop in the Stenbergian career was Sievert's cable works in Sundbyberg.

Tidied up cable works

It was in 1992 that Björn Svedberg asked Jan to take over the presidency. The same year Ericsson established its business areas, so that the successful cable company became Business Area Cables, with Jan as the head. The business area incorporated not only Sieverts but also a number of cable companies around the world.

Jan Stenberg really tidied up Sieverts. The sturdy but somewhat tired former family concern became a modern operation. The main office in Sundbyberg was closed down. Operations management was moved to newly built power cable and tele cable divisions in Falun and Hudiksvall, respectively. That was a successful move.

"Cable operations regained its initial strength and there was a huge growth in production. Since the mid-'80s cable manufacture has been earning huge sums for the corporation."

The three years as head of cable gave Jan Stenberg the reputation of being a "company doctor." The next patient was Business Area Public Telecommunications. Symptoms of weakness were beginning to appear after the first successful years with AXE.

"Profitability was scant when I took over as president of the business area in July 1985. Sales had bottomed out and budget targets for the year were not expected to be reached," Jan recalls.

Something had to be done. Restructuring, streamlining jobs and the full arsenal of business medicine had to be injected into the company. With the help of economic developments the wind changed for the business area. In 1990, when Jan handed over to Håkan Jansson, AXE was Ericsson's biggest box-office success.

In conjunction with the Sonthofen meeting in 1990 and Lars Ramqvist's thorough reorganization of the company, Jan moved over full-time to the Executive Committee.

Big change

Why then is Jan Stenberg leaving Ericsson?

"Well, I think I have been working long enough here. For many years now, I have been talking about the necessity of change. We should always be prepared to change environment and dare to change our lives. Not everybody believes in this, perhaps I didn't always. Now I'm taking this step as the next part of my own process of change. It feels very good. I know I am doing the right thing."

Quality-committed

In recent years a lot of Jan's work has had to do with continuous improvement and TQM, Total Quality Management. The job has been extremely stimulating, he feels. For sure, SAS will reap the benefits of what it means to have a president who is so totally committed to quality work.

"It will be tough, but SAS will survive as a leading carrier also in a deregulated airline market," Jan promises. The years at Ericsson have taught him a lot about how to manage a company in a market with tough competition.

What will Jan miss the most about Ericsson?

"Kerstin Bird, he says without hesitation. Kerstin has been Jan's secretary and foremost colleague since 1968."

Text: Lars-Göran Hedén



Set mobility in action

This issue of Contact is dedicated to an important figure in Ericsson's top management who is leaving the company. Jan Stenberg has been named president of SAS, thereby taking a new step in his personal development.

Jan is a perfect example of what Ericsson can do for those who want to have a rich and evolutionary professional life. He came to the company as a young attorney and leaves as one its three top executives. Talk about the opportunities for personal development!

OK, I know that we can't all count on a place in top management by the time we leave the company. But I do know that there are always opportunities for development here. For employees at all levels and in all types of positions.

The telecommunications branch is undergoing enormous change, parallel with the pace at which electronics and other technology are evolving. This makes great demands on Ericsson's flexibility, on the company's ability to change and adapt to new conditions. For those of us who work here this means that the job we have today perhaps may not exist tomorrow. We shouldn't see this as a threat but rather as an opportunity.

At Christmas we reported in Contact about how production workers in Östersund were being retrained as programmers. These people are just as good an example as Jan Stenberg of how can develop in Ericsson. You just have to seize the opportunity.

In principle there is still a hiring freeze in the company. Hence it is precisely now that opportunities are particularly good for moving around internally.

Moving around people and letting employees with different backgrounds meet in new projects is one of Ericsson's recipes for success. The successful company is the one that can best invest in competence development and that allows people with different skills to move around in the organization.

I wish Jan Stenberg every success. He is someone whom it was always exciting and fun to interview. I can only congratulate the editor of the in-house publications at SAS.