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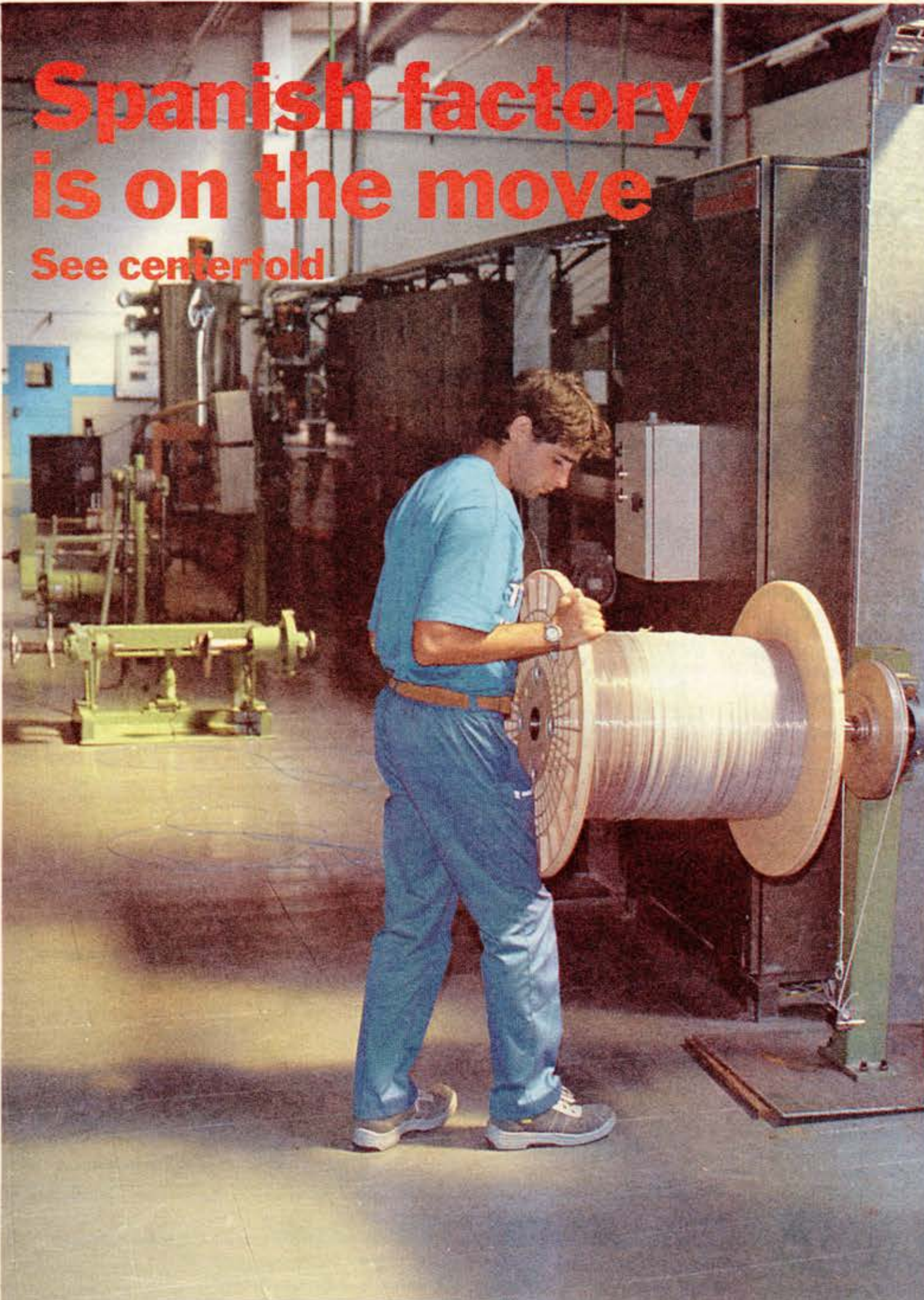
ERICSSON 

PUBLICATIONS FOR EMPLOYEES WORLDWIDE

No. 6 • 1991

Spanish factory is on the move

See centerfold



INSIDE:

A big APPLE for Ericsson

The city known as "The Big Apple" – New York – has definitely taken to Ericsson technology in mobile telephone systems. At the end of July, Ericsson took over a mobile phone system from its arch rival Motorola. Page 5

INSIDERS on guard

The new insider laws make it harder for people with access to trading information to influence stock prices. The finance inspection board have many Ericsson names on its insider lists. Page 6

Closer WATCH for Telecom

The ISO 9000 review at Ericsson Telecom at the end of last year could have ended really badly. The quality reviewers felt that internal reviews were not being done often enough. Page 10

DECT at the door

The long-awaited European standard DECT has come a long way. Read about what DECT is and the play surrounding it, a standard of immense significance for Ericsson in the coming years. Page 21

Profit machine on the brake • sid 4

ERIPAX in international data network

The well-known chemical company Henkel has chosen to base its data communications network on ERIPAX. The first order covers 19 nodes, PS500 and PS10, which will be placed in Germany, France, Italy, Belgium, Holland, Spain, Austria, Hungary, Czechoslovakia and Yugoslavia. The order also includes an NM400, which will be placed in Dusseldorf, where Henkel has its international headquarters.

Order for transmission for England

Ericsson Limited, Ericsson's wholly owned subsidiary in England, has received an order for transmission equipment from British Telecom.

The order, which is worth about 100 million kronor, reflects an increase in business relations with BT to include transmission equipment in addition to the AXE 10 switches that were already delivered for BT's modernization of the tele network.

Ericsson received the order thanks to the fact that the products correspond to BT's rigorous evaluation criteria and that they met with BT's specifically technical demands.

During the next five years, BT will introduce a synchronized transport network based on the next generation of transmission equipment.

Scouts can call cordless in Holland

Ericsson will deliver a cordless communications system with more than 700 phones to the Dutch scouting association, organizers of the World Scouting Jamboree to be held in Dronten in the Netherlands.

The system will first be used with the European jamboree scheduled for 1994 as a test run for the international jamboree to be held the following year.

Yugoslavia buys BusinessPhone

The police in Zagreb has bought an additional 42 BusinessPhone 90 which will be placed in police stations throughout the city. Previously, there were about ten systems.

Ericsson sitches learn to speak

Offerings of applications for MD110 and BusinessPhone have grown even more. The latest novelty is voice processing. The system is known as Voice 100 and has recently been launched internationally.

To complement its offer with voice processing, Ericsson Business Communications chose to sign an agreement with the American company VMX, one of the very largest in the field in the U.S.

The agreement gives Ericsson the right to market and sell VMX products all over the world.

In the U.S. voice processing has long been an obvious part in the company's communications system. Now, Europe and the rest of the world is competing with the U.S. in this field.

"We see an unbelievable market potential for these products and applications," says Hans Calmin-

der, hastening to point out research done by the American Probe, which concluded that the European market for voice processing is worth a total of about 147 MUSD a year and that this will rise to 640 MUSD by 1994.

Voice 100 launched internationally is the smallest system in the product line. In the fall, the other larger system will be launched. The entire line will be sold as applications to MD110, BusinessPhone 150 and BusinessPhone 90. Ericsson will help customers to find the right solutions and configurations as well as offer training, support and services at various levels.

Many-faceted

Voice processing offers many functions. It can be used as so-called voice mailbox, which just about works like an answering machine. More advanced areas of use are, among others, so-called automatic first answer. The voice processor serves then as a switch-

board operator. The caller, by pushing on the voice button located on his phone, can connect directly, for example, with a sales or service department or to an actual switchboard operator. In this way, operators can better take care of those who really need help.

Another way of using the voice processor is the so-called questions and answer.

An example of this is the Swedish Insurance automatic sick call-in. Another area of use can be order processing and ticket bookings.

The systems are very flexible. Voice applications are tailor-made according to individual customers' needs. The possibilities are endless and the advantages a company gets by having a voice application are numerous.



TEAM Voice
Message Processing System

ERICSSON

B and K divisions have jointly put out a new brochure on voice processing.

"Internally, efficiency increases since employees can always reach each other. It is easy to play it in, listen, leave a message," says Hans, who likens the voice mailbox to Memo.

They have to a large degree corresponding functions.

Maria Rudell

BusinessPhone in new markets

BusinessPhone 150 comes with digital connections to the public network. This will make the system even more competitive and open up the possibilities for entering new markets.

The last hectic days before summer vacations began, the management group in B division at Ericsson Business Communications decided to increase investments in further development of BusinessPhone 150. The system's present analog connections to the public network will be extended to digital trunk lines.

"Without the digital connections, the product would have been dead in two years at most," says Sven Killander, responsible for product line System in B division.

Digital is cheaper

Behind all this is the rapid digital expansion in the public network. Telecom administrations are not interested in analog connections, since digital is more cost effective for them. It will be especially difficult to get permission to hook

Increased competitiveness thanks to digital connections

up today's BusinessPhone 150, which moreover signals with an Ericsson-developed code.

Simple updating

The work that is needed for updating the product does not entail any major overhaul.

"We exchange the components that code the system to standard circuits and switch over to signaling according to standardized procedures," says Sven. Software in the system remains unchanged.

Delivery in 1993

Already in the beginning of 1993 the division expects to deliver the first system with digital trunk lines.

"It will be a little change that will have immense effects," says an optimistic Lennart Detlefsen, head of B division. He foresees increased sales and better profitability.

More competitive

"There is still no competitor with a product that can match BusinessPhone 150 when it comes to functionality and usability. We increase our competitiveness with the digital trunks. It will be a more future oriented system and new markets will open up. Large markets like England, Germany and Spain, where the product does not exist today since it is not approved in its present form.

A further effect of the development is that telephone sets to MD110 can also be used for BusinessPhone 150, which leads to bigger manufacturing volumes and reduced cost levels. Production of the special set DIALOG 750, which is used with the smaller system today, will be phased out at the same time that the new system begins to be manufactured.

Maria Rudell

Countryside orders from Hungary

Ericsson has received additional orders for tele equipment for Hungary. At the beginning of July, a contract was signed for a so-called rural project, for the Hungarian countryside. The contract was worth 80 million kronor.

The contract involved a turn-key project in Mohacs in southern Hungary. All equipment will be delivered complete and ready to put in operation by mid-1993.

Parallel with this new contract, work is also going on for offering and supplying the majority of more than 1.5 million telelines, which should be ready during the coming five-year period.

ERE and Titan form company

Ericsson Radar Electronics (ERE) is planning to join with its American collaborator Titan to form a new company.

The condition is that ERE will bring home the huge order for the land-based radar that is now being fought for in the U.S.

EDITORIAL

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Ericsson Cables moves manufacturing

Ericsson Cables' production in Kungsbäcka is closing down. Some 150 employees are affected by the shutdown. Production is moving to the two factories in Falun and Hudiksvall.

150 laid off in Kungsbäcka

The board of Ericsson Cables AB has decided to initiate MBL negotiations on a concentration of cable manufacture in Sweden at the company's two factories in Falun and Hudiksvall and on shutting down the plant in Kungsbäcka. The shutdown affects 150 workers and staff. At the same time a number of new jobs in Falun and Hudiksvall have opened up. These will be offered with preference to personnel from Kungsbäcka.



At Ericsson Cables' factory in Kungsbäcka, so-called special cables are produced. Manufacture will now move to Falun and Hudiksvall.

Concentration of cable manufacture is expected to bring about a notable increase in efficiency within Ericsson Cables' Swedish production.

"The effects of this rationalization must be utilized so that we

can successfully meet a changing cable world with increased competition and freer trade across borders," says Lars Berg, president of Business Area Cable and Network.

"With lower development and

production costs we can further develop our Kungsbäcka range at the same time as we achieve the means for an aggressive approach to the market. This is necessary for our continued growth in Sweden as well as in Europe."

Major order from Colombia

At the end of July, it was clear that Ericsson had received an order for supply of local and transit switches for Colombia. The order is worth 130 million kronor and is one of a number of large orders that Ericsson has received from the country in recent times. The combined value of order intakes from Colombia amounts to 280 million kronor. Ericsson's traditionally solid grasp is thus further strengthened.

The current order covers one-third of the 490,000 new lines that the Colombian tele administration is installing.

Mats Albom is responsible for marketing for Colombia in Ericsson Components. Together with his colleagues from Ericsson Telecom Mats has worked hard to take home the order. Components' share is 5 million kronor.



Power tried at German bundespost

The German tele administration Bundespost has shown an interest in Ericsson Components power system. That can be an inroad into the German market, says Louis Masreliez, head of marketing in Germany. It is the first time that Ericsson power has formed part of plans for German public telephony.

Germany, too, has monopolized its telephone market. Power suppliers in the past have been

mainly German, but today opportunities have opened up for foreign suppliers also. A certain amount must be purchased abroad.

The Bundespost wants to have a high-frequency system with 60W rectifier. The rest of the world uses 48W and Ericsson Components power division has therefore specially built a 60W system for the German market.

This time the system will not

feed AXE exchanges but rather SEL (German Alcatel) and Siemens switches.

The Bundespost has been Europe's largest employer, with 500,000 employees. A few years back, it included the Postal Service, Telecommunications and Banking. Germany is one of the world's largest telecom markets.

Inger Bengtsson

ENE is twice as large

Ericsson Network Engineering AB has taken over the construction unit in Bofors Electronics AB. The deal means that Ericsson has taken over 180 employees in Kista and operations with a turnover of about 130 million kronor.

Bertil Strid, president of Ericsson Network Engineering AB sees as very positive the doubling of ENE that the deal brings.

"We are getting a very strong home market organization. In one shot, we have become twice as large. Moreover, we will also be more flexible and many-faceted in our marketing niche."

"ENE builds all kinds of communications network for voice, computer and image transfer. It has particularly strong competence now in the matter of transmission and radio link know-how. It is especially important to the company's chances of winning export projects in this area."

The newly acquired unit will move in the fall to new quarters in Järfälla. With the merger, Ericsson Network Engineering AB has 350 employees and an annual turnover of close to 350 million kronor.

Split threatens British Telecom

The British telecom administration, British Telecom, may be split into two separate companies – one for domestic and the other for international traffic. The reason is that the British regulatory authorities for telecommunications, Oftel, is accusing BT with discrimination against competitors. That's why BT must be split up into two companies that will not favor each other at the cost of competitors.

The proposal recalls when AT&T in the U.S. was split up in the mid-80s. The world's largest company, with more than a million employees, became instead seven Bell companies.

Right now British Telecom is half privatized. At the same time the British market has been deregulated so that competition on the British market for public telecommunications now comes from Mercury.

Car manufacturer invests in tele

Japanese success on the automobile market have not made life easy for the American and European competitors. Now one of the most successful Japanese companies, Nissan Motor, is investing in telephony. What can all this mean?

Together with DDI, one of Japan's two private mobile tele operators, Nissan will form a company that will offer mobile radio services. The Japanese market for mobile telephony is growing incredibly fast. The number of subscribers increased last year from 450,000 to 900,000.

Interested parties in the new company are among others British Telecom and Motorola's Japanese subsidiary.

Danish mobile phones for Czechoslovakia

Some 2,250 Dancall telephones have been ordered for a new mobile telephone network in Czechoslovakia. Dancall described the order as significant, although it is relatively small. In five years, the mobile network in Czechoslovakia is expected to serve 80,000 subscribers. Hence, it is good to be in on the start and supply sets now, the Danes reason.

The Czech order is the result of intensive work covering several countries in East Europe. In the first place the sets will be used as "fixed" sets. Some 300,000 Czechs are currently waiting for a phone. It goes quicker and in many cases cheaper to expand the mobile tele network where the queue is largest.

The Czech mobile telephone network was built up by a Czech-American consortium, Eurotell.

We hope that our "news pages" at the front of the paper will be a change for the better. Here is where we group all the news from Ericsson companies around the world, mixed with news from the telecommunications world around us. Many have sought information on what Ericsson's com-

More news in the paper!

petitors possess, so we have made room for such news too.

We gather the material for the news pages from many different sources – company press releases, tips that our editors pick up

and other media. You as a reader can help us make the news pages better and "closer" to you. You can do so by letting us know about current events around you or by sending us a press clip and other

written information that we can use.

Get in touch with Ericsson's corporate editor, Lars Göran Hedin, Tel. +46 8 7199868 or with the editor of your own business area publication. You will find the telephone number on the editorial masthead on Page 2



We invest for the future

First half results have, to a large degree, been marked by the effects of worldwide recession. Ericsson could not avoid the effects of this. The pressure of competition in our branch has toughened, at the same time that negotiations in telecommunications have been suspended in many instances. The result has been fewer order intakes in most of the group's operations. In spite of this dismal picture of the market, we have now reported our second best half year results ever. This is solid testimony to Ericsson's strong position.

The first half year of 1991 has also been marked by heavy investments. In order to remain a leader in our most important area of technology, we have invested beyond a billion in research and development and on market adaptations of our systems. This increased investment corresponds to more than the drop in earnings for the first half.

Inauguration on July 12 of the large exchange system that Ericsson installed in New York/New Jersey in the States for the mobile telephone operator MetroOne was an important milestone for Ericsson. It is today the largest exchange system in the world.

Delivery of the first GSM system in Europe was another significant milestone. We achieved delivery at the appointed time for Mannesmann Mobilfunk in Germany and to the telecom authorities in Sweden, Finland and Denmark.

In the U.S. we are ready to have the first digital mobile tele system in operation in October. Already by the turn of the year this could lead to commercial deliveries. And in Japan our input in the Japanese digital mobile phone project for NTT is going according to plans.

These examples show that Ericsson has taken a leading position in the matter of new digital systems, just as earlier we had taken the lead in analog mobile telephony, where Ericsson's market share continues to be a full 40 percent.

Ericsson's investments in the new technology also apply to the same high level in public telecommunications. Comprehensive projects are going on in important areas like ISDN, intelligent network and digital cross coupling. The company is also way ahead in work with cordless telephony for companies and organizations. Twelve test systems have been installed and are in operation.

I am convinced that Ericsson's strategy to invest even more in the development of today's and tomorrow's tele systems will prove worthy for the future – both for employees and shareholders. We already see positive effects in the form of solid technology development results and beneficial discussions with our customers. Hence, we have every reason to be positive about order developments for the rest of 1991.

We shall continue to bring out good products of high quality, and we shall deliver them on time. So, we can maintain and strengthen our leading position within our main field.

Lars Ramqvist

"Personnel has worked better than ever"

"I am extremely pleased with our first half this year. Everything went beyond expectations. We have not lost any market shares. And we have delivered well on time."

Thus began Lars Ramqvist his press conference when first-half results were presented. He presented reduced results but it was investments in future technology that mostly explained the downturn. Hence, the president's confidence in the future is not only unbroken but even more solid today than it was a year ago.

"We can be proud about first half profits of 1.7 billion that Ericsson has just reported," says Lars Ramqvist. "Even if the results are lower than last year, it is nevertheless the second best half-year result ever. This was achieved despite a heavy increase in Ericsson's investments in technical development. Over the half year the company has spent more than a billion more than in the corresponding fall period on among other things development of digital mobile telephone systems, cordless business communications, digital cross couplings and ISDN."

"Ericsson invests more than anyone else in the field of technical development right now. We continue to invest extensively, rather than aim for short-term gains in the company. Hence we have reached a position where we are stronger against our competitors than before. For example, in digital mobile telephony, today we are judged more market leading than what we ourselves expected. We are ready to install the first test system in the U.S. already in September - one month ahead of schedule."



Ericsson's massive investment in technology has made it possible to meet the huge commitments made this year. Thousands of technicians have worked under Pressure to develop tomorrow's systems in radio and tele-technology.

"Along with the massive investments in technical development, the global recession has also affected Ericsson's results. The demonopolization of telecom operations in many countries brings a new factor into the picture: The large state tele administrations have also begun to feel the recession, to a larger extent than before. This explains why several important negotiations have been suspended."

"We can understand the reaction of the operators. Among operators in the States, to take an example, tele time - sold call time - has fallen 25 percent. It is clear that this will af-

fect the desire to invest," says Lars Ramqvist.

"Tele operators cannot wait too long to invest in networks. Hence, we see ahead of us a strong increase in order intakes in the fall. We have several really large projects on the way. Even if we cannot foresee a repeat of the record 1990 earnings, there are chances for a real rebound in the fall."

"The first half figures also reveal that Ericsson has succeeded in rationalizing and streamlining its operations. Today, we have an organization and personnel that function better than ever!"

Lars Göran Hedin

Optimism despite lower profits

Ericsson's results for the first half of 1991 amounted to 1.772 billion SEK. This is a drop of 26 percent, compared with last year's record high 2.391 billion SEK. Behind the drop is the fact that Ericsson is affected by the general recession in industry and even bigger investments in research, development and market adjustments.

The group's consolidated net sales amounted to 22.463 billion SEK in the first half, virtually unchanged compared with the year-earlier period. Taking into account the divestment of the Italian FIAR group last fall, net sales for comparable units rose 2 percent. Order bookings fell from 26.823 billion SEK to

21.55 billion. Consolidated pretax income fell from 2.391 billion SEK to 1.775 billion, of which 110 MSEK was net capital gains. Income per share after taxes paid and full conversion was 5.26 SEK (6.98 in 1990). After taxes paid and estimated deferred taxes after full conversion, income per share was 5.68 SEK (6.64).

The decline in income is attributable to an increase of 1.145 billion SEK in total technological development costs at Ericsson during the first six months compared with the same period in 1990. The major importance of this development work is exemplified by attention focused on Ericsson's successful replacement of the mobile system in New York and New Jersey and the on-time delivery of the new GSM-standard digital mobile telephone systems in Sweden, Finland, Denmark and Germany.

The decline in order bookings was partly attributed to the global recession and partly to the fact that world telecom administrations in many instances have delayed negotiations as a result of the recession.

Already in this first half, corporate management reckons with a stronger showing of order bookings. The full-year results for all of 1991, despite this, are expected to be lower than last year's.

Despite a negative cash flow, the group's net finances improved. This is a result of the drop in Swedish interest rates, combined with successful investments. Ericsson's solidity continues to be strong and is now at 38 percent.

The group's investments in buildings, machines and inventory rose in the first half to 1.610 billion SEK (1.547 billion), of which 759 MSEK (568) was invested in Sweden.

BUSINESS AREA RESULTS:

- **Public Telecommunications** reported a 3-percent decline in net sales, due mainly to the transfer of certain operations to the Components business area. Order bookings, down 33 percent, were affected by delays. A strong recovery is expected in the second half of the year. Operating income declined, primarily as a result of technology investments.
- In **Radio Communications**, net sales rose 10 percent while order bookings declined 6 percent, also primarily as a result of delayed purchasing. The business area incurred sharply rising technological development costs related to the accelerated efforts for development of the digital mo-

bile telephone system. This resulted in an earnings decline during the period.

- **Cable and Network** posted a 3-percent increase in net sales. Order bookings were down 4 percent. However, for comparable units this represented a 9-percent increase. The economic recession adversely affected the business area's extensive operations in Sweden, while network operations outside Sweden continued to develop favorably. Operating income improved.
- **Business Communications** posted a 2-percent increase in net sales and a 1-percent rise in order bookings. Order volumes grew sharply, but price levels declined. As a result of this trend, com-

bined with heavy technological development costs for the new cordless subscriber exchange, operating income was lower.

- **Components** registered a 7-percent rise in net sales and order bookings as a result of the takeover of the power operations in Spain and Mexico. Operating income was slightly lower.

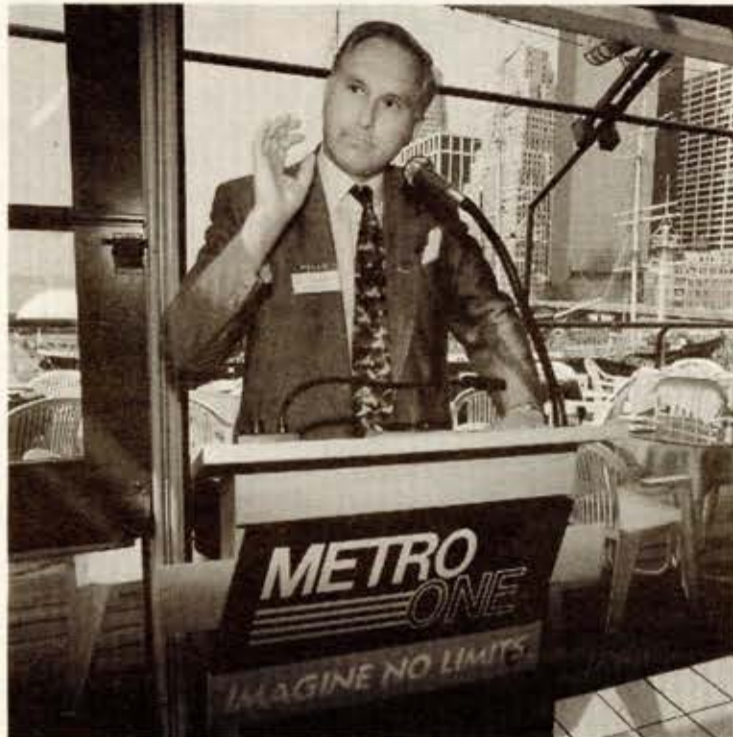
- **Defense Systems** reported a 35-percent decline in net sales and a drop in order bookings of 38 percent. This came as a result of the divestment of the Italian FIAR group. For comparable units, order bookings were up 19 percent. Operating income improved strongly for the business area.

System cut-over in New York

The weekend of July 12-14 can truly be described as historic for the Ericsson Group. That was when the so-called "cut over" took place, changing equipment in Metro One's mobile phone system in "The Big Apple" from Motorola to Ericsson.

Ericsson builds new mobile phone network over a weekend

It was in October last year that Ericsson-GE got a large order for Mobile telephone equipment for McCaw Cellular Communications and LIN Broadcasting Corp., America's largest mobile telephone operator. The equipment was to be used to expand and to improve the quality of the system in McCaw's largest market. It was this order that also included supply of a digital switch system that was to replace the earlier Motorola system in New York.



"The company that succeeds in New York and survives the tough competition here, will in general also succeed in other places." So said Ericsson President Lars Ramqvist, when the mobile operator Metro One marked the "cut over" in New York. This meant that mobile subscribers in "The Big Apple" could now call in a system using Ericsson equipment.

This took place on July 12-14 and most of the work was done in nine hours from 10 P.M. Friday to 7 A.M. Monday. The time was chosen so that subscribers would

be inconvenienced as little as possible. As soon as the new equipment was in place mobile phone users noticed a considerable improvement in quality, not least

talk quality. The system has also now gotten larger capacity and better coverage. Preparations for the systems switchover were in progress for a year and meant a lot of work for ERU, Ericsson Radio Systems in Richardson, Texas. For radio technicians, New York is something of a nightmare, skyscrapers, congested streets and everything surrounded by water.

More than 150 ERU workers were involved in the project and at the cut over itself in New York there were more than 250 employees from Metro One and Ericsson.

In Metro One's system, three switches and 136 radio base stations, so-called sites, have been switched and 22 new ones installed. In the fall, additional sites will come into use and by the turn of the year the system will have more than 175 radio base stations.

Unlimited network

At the official opening on July 22, Craig McCaw, the largest U.S. mobile operator, said that he will make an unlimited mobile phone network in North America and that he wanted to do so with Ericsson.

"Already from the start, Ericsson is the principal supplier and we hope to be able to use Ericsson equipment in many, many of our systems," he added.

Gunilla Tamm

No new orders in Kuwait...

The local exchanges that Ericsson supplied in Kuwait survived the war quite well. Some 90 percent of them are intact and Ericsson Telecom personnel is back in place to handle maintenance. However, there would not be any big orders over the next few years.

As a result of political decisions, other telecom companies, among them Alcatel and AT&T, will supply additional mobile telephone exchanges as well as local and transit exchanges for Kuwait.

The potential for increased telecommunications in the coun-

try is small, since the population is only half of what it was before the war.

From long before, there is older Ericsson equipment installed in the country. There is also AXE as well as a system from the Japanese company Fujitsu. Now this system is being expanded with an additional three. However, Kuwait has chosen to not involve Ericsson to the same extent it has done up to now. Instead, it is investing in totally new suppliers.

The country's leaders have decided not to accept such a large amount of foreign labor as before. This affects the possibilities of operating and maintaining tele networks. This was handled to a large extent by foreign labor.

... but new order from paradise

Last year Ericsson received a big order from Mauritius. It involved setting up 50,000 tele lines in the paradise island state. In the summer, a further order was landed, worth 65 million kronor. With this, Ericsson has received orders for more than 235 million kronor from Mauritius.

"We are very delighted to have received a further contract in competition with several of the world's leading telecom companies," says Jan Eckerud, head of Ericsson's operations in Mauri-

tius. In our brief, we have total responsibility for the project's follow through."

The order includes project management and expansion of the local network in a number of large areas of the country. For the project, Ericsson will use personnel from its own network construction companies in Sweden and Southeast Asia. Finnish Nokia is part of the deal, as cable supplier.

Financing of the project is done through combined efforts. Swedish Export Credit, Finnish Export Credit and the Nordic Investment Bank are involved. Interest subsidy is being handled by BITS, an organization for technical and economic aid, and its Finnish counterpart, FINNIDA:

230 laid off in Kumla

Management at Ericsson's Kumla factory began layoffs last week of 200 workers and 30 staff. The layoffs came partly as a result of streamlining manufacture.

Operations in Kumla involves manufacture of mobile phones, mobile radio products and circuit boards. Some 1,000 persons work with these, of whom

200 are office staff. Since October last year, hiring has virtually ceased in Kumla, since volume decline in the mobile radio area was expected.

The decline was larger than expected and came at the same time that production was being streamlined.

Easier production

With price levels falling in mobile telephones, Ericsson and other manufacturers were

obliged to find new technology that afforded the possibilities to increase the level of automation in production.

This development that work content, the number of job hours put in per product, had to be reduced drastically.

The switch to digital mobile phone systems like GSM also meant further reduction in work content. Hence it was necessary in the long term to reduce personnel in Kumla.

EC probes call prices

The EC Commission in Brussels has launched a major investigation into price fixing for international tele services. Behind the investigation are charges the national tele operators are involved in price fixing. The Commission has now demanded information from operators on prices, costs and agreements on international pricing. Should it conclude that there are competition limitations in the price setting, the telecom administrations can be heavily fined - up to 10 percent of turnover.

NEWS IN TELECOM

AT&T collaborates with NEC

AT&T and NEC have joined forces to develop the next generation of mobile tele systems in Japan.

Behind the collaboration agreement lies the fact that the two companies, together with Fujitsu, last year agreed to develop a digital mobile tele network for Nippon Ido Tsushin Corp., a private competitor of Nippon Telegraph and Telephone, NTT. The three companies are jostling to supply equipment for the new network.

Collaboration between AT&T and NEC means that the two companies have decided to present a combined offer. The thinking is that the companies' system will be compatible, so that the network can be built of equipment from both companies.

Success in Spain for Northern Telecom

Northern Telecom is expected to play an important role in the modernization of the Spanish RICO network, a tele network for advanced tele services and computer traffic among, in the first place, public authorities. International Computers Ltd., which got the contract to build an X.25 network for 19 million dollars, chose Northern Telecom's DPN-100 network. The deal is not worth "more than" 7 million dollars, but it is of major significance to the Canadian company.

Southern Europe is an area where most suppliers are turning their attention. Telecommunications there is not as well developed as in Northern Europe and hence the market offers a lot of opportunities for the future.

Matra-AEG form joint subsidiary

French Matra and the German AEG will form a joint subsidiary for radio telephony. Ericsson already has a collaboration accord with Matra, which deals with mobile telephony, but is not affected by the new Matra-AEG company. The agreement between the two companies covers areas that lie outside Matra's accord with Ericsson.

Ericsson's deal with Matra covers infrastructure for public telephony, telephone switches and base stations. The two companies also work on the development of the GSM system.

British mobile phone order for Nokia

The free-standing tele operator Microtel in Britain has given Finnish Nokia an order for equipment and telephones for a mobile telephone network that is now being built in Britain. The first order is worth more than 630 million kronor. Microtel plans to have its new mobile phone network, which is of the GSM type, in operation next year.

Keep the door closed!

So far this year, 30 inquiries have taken place in Sweden concerning suspicions of insider trading. Since the Finance Inspection Board bolstered its resources, more allegations of wrongdoing have come up so far this year than in all of 1990. Of these, six cases have been submitted to the prosecution for eventual charges.

Ericsson has been spared from insider affairs during the Yuppie era when there was most speculation on the stock market. Neither Erling Blommé, head of Ericsson's legal department, nor Stephan Almqvist, head of Finance, has ever heard of anyone from Ericsson being suspected of insider trading. And either of them would have known if such were the case.

The Finance Inspection Board monitors, of its own initiative and following complaints, transactions that are suspicious.

If a clear explanation is found then the matter is dropped. Otherwise, it is taken up further with prosecution.

"Insider laws are a way of 'keeping clean' the commercial paper market and fighting against outrageous speculation," says Jan Gren, of the Inspection Board. "To commit an insider crime is in every way setting a price on one's honor."

Registered

At Ericsson's corporate legal department, it is decided who will be registered with the Inspection Board as insiders. The so-called group of 27 at Ericsson is understood. It consists of top management, directors of major local companies, business areas and corporate executive functions. Beyond these, very often in consultation with executives for

other corporate management functions, Erling decides who, because of their position in the organization, should be registered as insiders with the Finance Inspection Board. Those who are registered are notified.

About 70 Ericsson executives are registered as insiders. This means they are obliged to register with the Inspection Board all their own purchases or sales, and those of their closest relatives, of company stock. This is noted and published by the Inspection Board. Both Dagen Nyheter and Svenska Dagbladet, the two Stockholm dailies, publish at intervals a list of insiders that trade on the stock market.

Stefan Almqvist, of corporate finance, is naturally an insider. In his job he often has access to information that could influence share trading and well ahead of the general public.

"This means tremendous limitations on how I can buy and sell Ericsson shares," says Stephan. "I must weigh every situation carefully and discuss with my boss before I trade in shares."

Insiders at Ericsson

"The best time for a purchase or a sale is, for example, immediately after the earnings report is released - that is when the general public knows as much as I do about Ericsson on that given day."

The new insider laws, which

Insider laws apply to you!

Trade restriction applies to all employees with access to information that can affect share movements by at least 10 percent, according to insider laws enacted in February. Share influencing information could be knowledge of a company bid, but it can also be knowledge of earnings forecasts, earnings reports, large offers and contracts.



"Trading prohibition applies, for example, when one has knowledge about company bids," says Erling. "But also profit forecasts, earnings reports and offers that are exceptionally large or of strategic significance can be seen as information that could prohibit trading."

Same information

"One should not forget that there are a lot of people in companies that possess information without being able to determine how this could affect share trading," says Stephan. "The stock market is difficult to predict even for the most seasoned trader."

"The thinking behind insider laws is that all the players on the stock market should have access to the same information. Great demand is placed on companies to inform the exchange and the public on events that influence the company's standing.

"Those who know more must not use the additional knowledge," Erling explains. "If one should allow those who have more information than others to use their additional knowledge the imbalance could lead to honest players losing confidence in the market and withdrawing.

Publicity

It is not only the company but individuals themselves that are responsible for observing the law. Should an insider crime be committed by someone high up in the corporate hierarchy, naturally there will be a lot written about it. Even if the company is not formally responsible for it there is still a lot of negative publicity.

"But insider law means that everything one does as a registered insider is noticed. It is good that room for conscience determinations is minimal - one is not tempted to try to make a quick 'buck,'" says Stephan.

"We insiders see owning of Ericsson shares as a long-term investment," both Erling and Stephan point out.

Text: Pernilla Åström
Photo: Maria Petersson

came into force in February this year, mean that in practice all employees of a company listed on the stock exchange are affected by trade restrictions. Trading in commercial paper beyond stock influencing information that is not public is a criminal offense. That has to do with such information that, when the public shares in it, can affect a share trade by at least 10 percent. This is regardless of how small or large the transaction is.

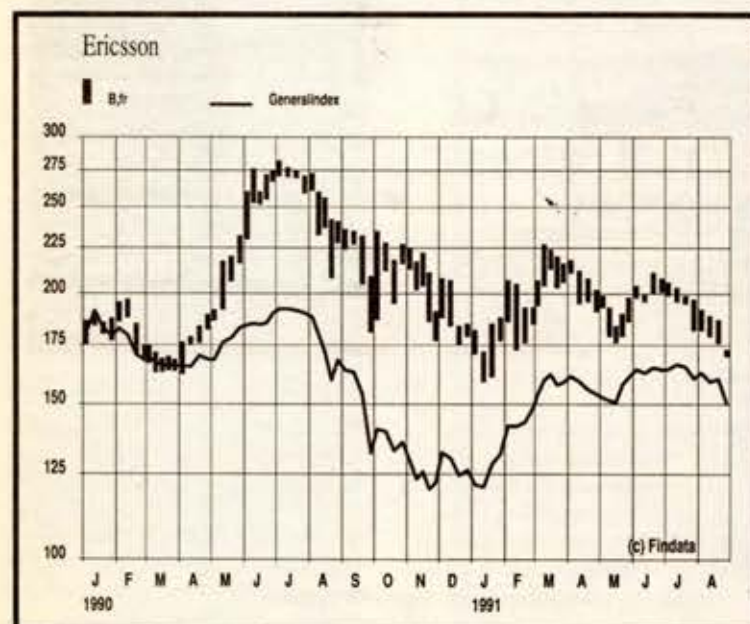
"But of course the authorities distinguish between transactions

that involve huge sums and those that are of immense returns," says Erling. The penalty range for insider trading can be from a fine for a slight offense up to four years in prison for major offenses.

Second and third hand

One should not encourage others to buy or sell shares using confidential information from the company one is working for. Even those getting information second or third hand are prohibited from trading.

Current shares and convertibles



It has been a mixed market this summer. Before the coup attempt in the Soviet the general index drifted 5 percent. With the disturbing news from Moscow at the beginning of last week, world markets took a dive, including the Stockholm bourse.

When news came that the coup had failed, the market picked up a bit, but not altogether. Ericsson shares also eased in the rebound. This was undoubtedly a result of the market waiting for a considerably negative first half report from Ericsson. At press time shares were down to 177 kronor. It had sunk from a level of 200 SEK in the summer, which is more than for the total market.

Many felt that competition is toughening, not least in the area of

ERICSSONS SHARES

Date	Mutual Fund		Share Savings Fund	
	Share price (SEK)	Assets (MSEK)	Share price (SEK)	Assets (MSEK)
1988-12-31	135	52,2	343	56,0
1989-12-31	304	94,1	825	77,1
1990-12-31	317	86,4	86	65,6
1991-06-30	362	92,5	98	71,2
1991-08-15	331	84,0	88	63,0

Share prices on August 15 are based on a share value of 184 kronor and a convertible rate of 340 percent.

mobile telephony, as well as that the global recession was putting a brake on orders for public telephony. Ericsson has also heavily raised its investments for R&D. Collectively, this means pressure on next year's or this year's profits.

With a profit forecast under that of last year's after financial appropriations, this means a p/e ratio (price in relation to earnings) of 15, which in large measure corresponds to the average for the Stockholm bourse's industrials.

Mobitex in 1,600 postal van

Work on the current largest Swedish Mobitex assignment is in full swing.

At branches of Ericsson Radio Systems Sweden AB (RSS), Mobitex equipment has been installed in more than 1,000 postal vehicles, and at the start of next year 1,600 vehicles will be installed. However, the project will not be completed with that. RSS and the Swedish Postal Administration have signed an agreement for development and maintenance over ten years.

In the spring of '88, the Postal Administration, Ericsson and Televerket Radio signed a joint

agreement on Mobitex. For Televerket Radio, the Postal Administration is the largest Mobitex

customer so far. The assignment is also large for Ericsson and RSS, and this year alone it is business amounting to 20 million kronor.

"Lars summer a small part was delivered but it was really in the fall that work got into full swing," says project leader Lars Hällström of RSS.

Huge assignment

"Mobitex installations is a huge assignment for RSS and hundreds of technicians and installers do a fine job, which sometimes call for

overtime. All 29 branches in Sweden will share in the installation work. Up to now our workshops from Sundsvall in the north to Malmö in the south have been involved," says Lars. A full day's installation work is needed per vehicle. Most of the vehicles, some 500 of them, have been installed in Stockholm.

The equipment involved is the radio modem C700 and the EPU printer. Both products are made at the Radio factory in Kumla. Deliveries from the factory have gone smoothly. Lasse is also very pleased with the excellent job done by designers at ECS.

Alarm

"All the vehicles used by the Post Office will be equipped with Mobitex," says Svante Jonsson, project leader at the Postal Administration.

"Postal vehicles in the project include those used for emptying mailboxes, transporting valuables and distributing letters and packages. They are all equipped with Mobitex which will mainly be used for directing the vehicles."

Besides the radio modem C700 and the EPU printer certain special parts have been installed for alarm units. Installation is done in stages and the alarms are being mounted in August.

The alarm, which includes among other things

concealed buttons, is important for personnel security. Of course, postal vehicles are not often robbed but it happens and one cannot tell if the vans are carrying just ordinary mail or valuables.

With the help of Mobitex, the Post Office will be able to use their vehicles more efficiently. In August, they will be linked to a central planning computer in the Mobitex system.

Further development

At the end of the year, all the vehicles in the postal service will be equipped with Mobitex. This does not mean, however, that the project is completed.

"We see several interesting developments in Mobitex," says Svante Jonsson. One project is to use bar code readings. All mail is packed and freighted in postal containers. By marking these containers with a bar code and using Mobitex we will always know where every container is located."

The construction needed for this bar code reading is currently being worked on at ECS in Kista.

At the postal services they are also looking into other interesting Mobitex uses, which can produce huge volumes.

"The postal service is actually Sweden's largest transporter and as such is a very interesting customer for Ericsson and RSS," says Lars Hallström. Besides Mobitex, he mentions mobile telephones and maintenance services. Here we have TPS, Third Parts Service, an agreement on maintenance of postal computer equipment.

Gunilla Tamm



The Postal Administration's project leader, Svante Jonsson, together with Ericsson's project leader, Lars Hallström, Ericsson Radio Systems Sweden, RSS AB. Photo: Björn Seger

Virtual Image Display – a mini-TV with magnifying glass

It is small, it is cheap and it is already on the "shelf." It must be easy to sell. It is only a matter of starting to produce.

Perhaps, one can define VID, Virtual Image Display, that way. A miniature TV with a magnifying glass.

A simple TV with a one-inch picture tube placed over the instrument panel in an aircraft or tank so that the pilot or driver can see both the reality with his own eyes and the reality that appears on VID magnifies 34 times.

Like looking at a 26-inch TV. Perhaps the most interesting thing about VID is that the focus on the TV picture is two and half meters away, which means that one can avoid concentrated viewing over a long time when the view changes between the picture outside the vehicle and on the TV.

Objective

Virtual Image Display was developed ten years ago when the

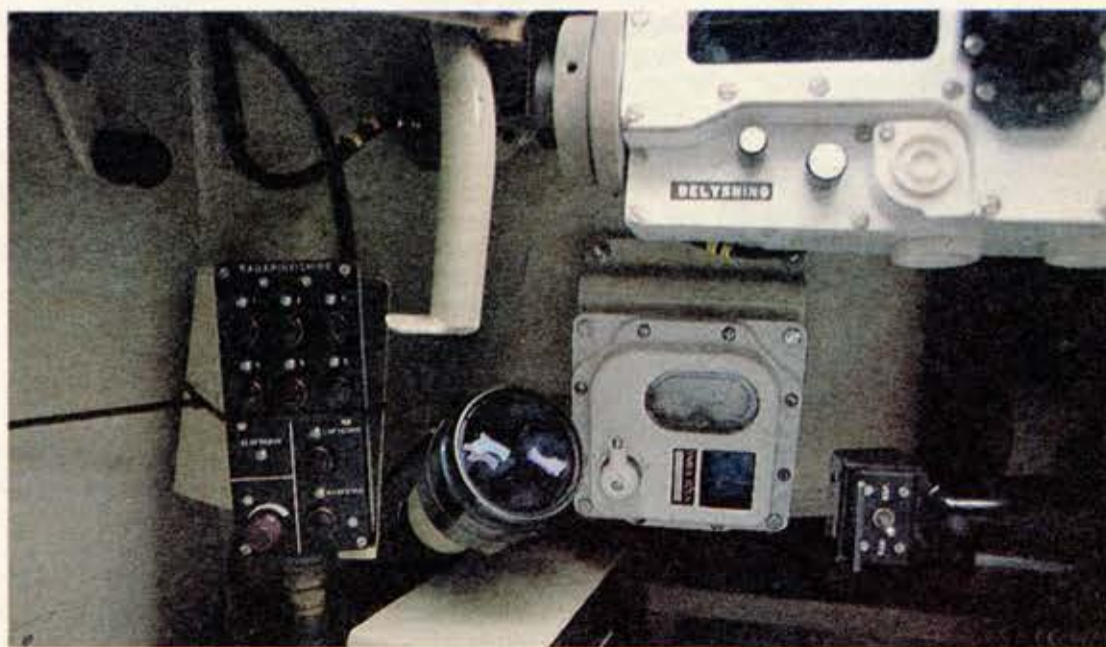
fighter plane Viggen was being provided with Maverick missiles, Robot 75. It has a TV camera in the nose and the picture was relayed to the pilot so that he could guide his aircraft and missile towards the target and then fire away.

At that time there was no relay equipment in the aircraft. In that case one had to screw on an attachment. Something small.

It could not be attached to the instrument panel. It had to go above it — a one-inch TV with a magnifying glass. And so VID was born.

VID is also found in combination with FLIR in tanks used by the Swedish army.

"This construction is very simple," says Lars Olsson, who has been marketing VID for some years now. "It is quite simply a TV, but in order to get room for it we placed only the picture tube within reach of the operator. It is only one inch and is placed behind an optical magnifying glass. All the other associated electronic gear is placed in a drawer. This is put where space permits, but still not further than five meters away.



VID installed in a tank 90.

"Now it is a matter of selling," says Lars Olsson, optimistically. And selling for export. We advertise and put out press releases. In the midst of the Gulf war we got a call from an American firm that read one of the releases and was all enthusiastic

and wanted to test VID with the Maverick missile.

"We got the equipment on the way as fast as lightning. But the war ended so it was never tested. Still, there is a lot of interest in it.

"We have just been to the States to demonstrate it and from this

trip we have come back with half a dozen customers to follow up working with.

"VID is unique," concludes Lars Olsson. No-one has this solution. The little, modest display could become a very big product.

Maud Umaerus



TOP SECRET

In a major customer satisfaction survey undertaken by Ericsson Telecom nine customers were asked what they felt were the most important factors in choosing a supplier and how well Ericsson manages this compared with its competitors.

For Ericsson, this is invaluable information. It would also be for competitors, if they could get their hands on it.

Just imagine how great it would be for us to know how competitors meet the demands of customers. That's why we can't say anything about the results.

"The conclusions drawn from the research is confidential material," says Tom Lindström at X division, which comprised the research. It was distributed to just a few people within Ericsson."

"Moreover, we have compiled special reports for each customer and these have been distributed to even fewer persons responsible for the respective regions."

But if we can't say anything about the results, at least we can explain why we carry out research like this and how it is proceeding.

"The idea developed to a great extent from research that was undertaken a year ago, when we asked representatives of Ericsson subsidiaries and regions what they felt customers thought about us," says Tom. "In the survey we have just done we went directly to the customer, through consultants, and asked the same questions in a simpler form."

"We wanted to know what specific factors made a customer choose a supplier, how well Ericsson responded to these factors compared with its competitors. Then we compared these two

aspects to get a measure of improvement potential at Ericsson."

High demands

The demands on consultants who carried out the questioning was very high. They had to have a knowledge of telecommunications, so as to speak the same language as the customer, they had to have "authority" since many of those

questioned worked at a high level in the administration and, naturally, they should be able to speak the language of national administrators.

The consultants did not analyze the responses, but rather they passed on the information to Ericsson for interpretation.

A key difference in Ericsson's customer satisfaction survey, compared with many others, is that the responses were not left anonymously. In the report one can see who said what, which is extremely significant in evaluating the responses. And this also explains why the report is so secret.

How were the customers selected?

"The regional managers decided which customers would be polled," says Tom. They chose the following: Telecom Australia, British Telecom, SIP, Telefónica, Jydsk Telefon, Telecom Eireann, Cable & Wireless, Hong Kong Telecom, as well as MCI and U.S.A.

Collaboration

The fact that precisely the regions and the subsidiaries were involved full time, not only in selecting customers but also at all stages, has major significance for the authenticity of the results and for how we intend to work with the response.

"If we at X had determined who would be asked it is not at all certain that we would have found the key people at the customers. In the course of the year a number of surveys were done with Ericsson customers, but it has never been done on a regular basis."

"Now we have done one," says Tom. "I hope we can continue doing so once a year."

The most important thing about surveys is that we can see tendencies, in which direction they tend to lean. That's how we know where to put our investments. The various surveys must also offer comparisons."

Conducting customer surveys creates expectations among customers and that is yet another reason for paying heed to what comes out in the surveys, for implementing changes to improve relations and then go out and re-question the customer.

Most customer contacts appear when the customer has a problem or is in the midst of negotiating. The survey, therefore, serves as a complement to all other channels that provide information on how the customer sees us.

Helena Lidén
Photo: Anders Anjou

Top priority

The five factors that customers judged the most important regarding suppliers. The order of priority can vary, but they all figure among the highest priorities:

- Systems reliability
- Price level
- Operation and maintenance functions
- Commitment and speed in resolving problems
- Prompt delivery

— Nothing we didn't already know

"We have close collaboration with our customers. Hence, the results of the survey do not come as surprise to us. On the other hand, it is important to have it in black and white from an independent consultant," says Ragnar Bäck, manager for - Region Europe, Ericsson Telecom.

He confirms that feedback is sometimes good, sometimes negative from customers. It is not simply a matter of going and locating areas for improvement but also finding areas in which Ericsson is better than the competitors, which can also be utilized.

"Part of what comes out of the survey can be used in direct discussions with the customer, as a base. That's why it is crucial that the survey not be anonymous. It involves going back to the customer and directly asking different people to develop his viewpoints."

Ragnar Bäck notes that cus-

tomers surveys are not the only way Ericsson goes about improving its relations with customers.

"We get information on how we conduct ourselves from many different channels and it is the collective evaluation that tells us what directions we must follow.

"But with continuous customer research we can measure the improvements made, directly at the customers.

That's why continuity in the surveys is important."

"We orient ourselves to customers with Kompass"

Personnel at Ericsson Telecom's economy unit are looking forward to changes. There is no fear for the new. Does that sound exaggerated?

Well, surely there are those who have been doubtful about the huge organizational change that has been going on recently. But the overwhelming majority of the close to 200 persons working there are positive.

On September 1 the economy unit went over from having been a functional organization - that is an organization where departments were divided up according to job assignments - to a customer oriented or interesting party oriented organization. That means personnel work in teams and therefore have a greater sense of unity, that section and department heads have significantly greater and more overwhelming responsibility, that decision processes are shorter and that the internal customers have a smaller group with whom to establish contact regarding economic matters.

What exactly is it that allows the economy unit to succeed in carrying out changes that everyone speaks about but that so few accomplish?

Influence

"I think that to a great extent that happens because we have not been forced to become a new organization but instead we ourselves have been involved in how things should be, through Kompass," says Åsa Persson, one of the section heads at the unit. Kompass is a method that in groups works with changes so that everyone is engaged.

"We have always been there and have influenced, not only how the organization itself should appear but also how we should sit physically," explains Margareta Frykman, group manager. It is very significant to sit together with people one enjoys being with and who share similar interests.

"We have continuously informed personnel," says Nils Enstam of the personnel staff and one of those who have been there all along working with the reorganization. That has meant a lot."

This makes for a very open job and information climate in the economy unit, the three say. Managers are open and do not suffer from "reserved thinking."

During the last two years a thought-out competence development has been done and those who will now lead the new organization have all received leadership training.

Now, perhaps it may seem that the reorganization was carried out in zero time. That's not the case. But measured against Ericsson criteria it has gone really fast.

"Work started at the end of 1990," recalls Nils Enstam. "Department and section heads met to discuss basic principles. Interested parties, that is the unit's internal customers, got to voice their views and thereafter a decision on principle was made. From February to the first of September the actual organization has taken shape.

Exciting

"It feels really exciting starting all new," says Åsa. "As section manager, I have more breadth than before and different responsibility too. It is also immensely stimulating being with and forming the new organization.

"We can count on problems at the start,"

she adds. "We will still have one foot in the old organization and another in the new. It isn't easy."

"The changes are not finished with this," says Nils. "We see the new organization more as a platform for additional change. Now we have many good conditions for further developing our collaboration with interested parties in a rational and effective way."

Text: Helena Lidén
Photos: Maria Petersson

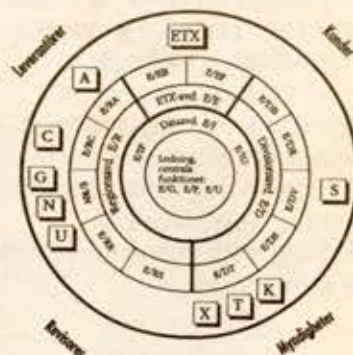


Margareta Frykman, Nils Enstam and Åsa Persson of Ericsson Telecom's economy unit are all positive about changes in the organization. If they can influence them themselves.

This is the new organization

The economy unit's new organization, which came about on Sept. 1, means that interested parties do not have to contact several different departments within the unit regarding different economic matters but instead it would all be handled by a team.

The two departments that worked previously with budget and accounting as well as personal accounting have been split up and instead have been organized in mixed teams that will



be working with ETX's regions, divisions and staffs. The sections that work with regions have been gathered in one regional department.

In the division section there are five sections. One has responsibility for T and X divisions as well as the K project. One works with taking care of all incoming delivery invoices and distributes them further to the respective customer team. Three sections work for S-division. This stems from the fact that operations for S-division are very comprehensive. Today, 130,000 of the 190,000 invoices are from S-division. Moreover, the economy unit is responsible for several of the production division's economy system.

ETX department gathers the reports for the entire company. In addition, it also works with finance and capital matters. The unit has its own computer department. It is responsible for operation and ongoing development of the some 25 systems that together handle ETX's economy system.

Radio Systems gets 1.7 million from Employers Fund

Radio Systems AB, Kista, received 1.7 million kronor from the Employers' Fund for quality improvement measures. Radio Systems, which has 420 employees, manufactures, among other things, radio base stations and is a company within the Radio Communications business area.

The Employers' Fund, which handles interest-bearing on employer charges, is a relatively new fund and this was the first time that allocations were given out.

"Our program, which is linked to both ISO 9001 and

Ericsson's "Excellent Employer," reaches out several years ahead," says Hans Hansson, personnel manager at Radio Systems.

As a means of preparing for certification before ISO 9001, all employees will attend a two-day "Quality Dialogue" course in the spring.

Among the quality raising measures in the project is a six-month introduction program for all new employees.

Another project deals with the physical work milieu. To get around the problems of spine, shoulder and neck ailments, all employees were given information about ergonomics following their vacation. A special recreation room has been set up and ergonomics is given alongside exercise.



Prince Bertil scholarship

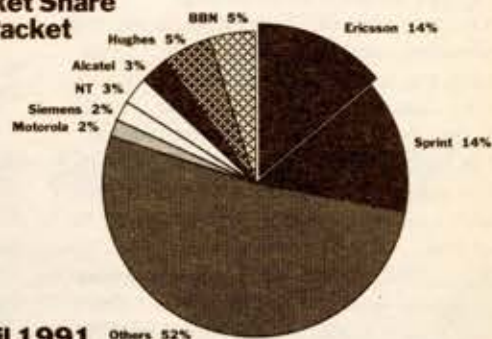
Tetra Pak and the British Foreign Office are sponsors of a scholarship honoring His Royal Highness Prince Bertil. The scholarship is opened to recent graduates or graduate researchers in the industrial or technical field. Studies will be done during 1992-93, in at least one term or at most one year at a British university or a technology institute. Applicants must be Swedish citizens.

Applications

Applications must be submitted before October 18, 1991, and should be sent to The British Council, Skarpögatan 6, 11527 Stockholm. More information could be had from Eva Sterndal, British Council, Telephone: 08-6670140.



European Market Share Private X.25 Packet Switching



Source: Dataquest April 1991

ERIPAX takes on a leader in Europe

Ericsson is the second largest supplier in Europe of data communications equipment for private X.25 networks, with a market share of 13.8 percent. Sprint International, including the acquired Plessey-Telnet, holds first place with only a 10-percent share to its credit.

This was presented by the market research company Dataquest in a recent report that showed suppliers' market shares for 1989.

According to the report, Sprint's market share did not change

markedly last year, while Ericsson's increased 35 percent compared with the preceding year. The acquisition of British Camtec accounted for half of the increase. Other important competitors like Telematic, Hughes BBN and Northern Telecom had lower decreased market shares.

Dataquest noted that the private European X.25 market was worth 347.1 million USD in 1989 and that this was expected to grow to 519 million USD in 1994.

Seven days that shook

Ericsson Telecom's ISO 9000 review at the end of last year could have gone really bad. When T division was reviewed by BSI a huge remark was characterized as "major" and there was a threat that the entire review would have to be broken off. Internal reviews were not conducted often enough.

For seven days, a project specification was drawn up. BSI continued its work so that in the end Ericsson Telecom would be approved. Now, work is continuing with internal reviews in the subsidiary.

By Helena Lidén, illustrated by Gunilla Schelin.



On January 7 BSI threatened to stop certification of Ericsson Telecom. On January 13, a project was presented for training internal Telecom is certified, but all of those who shared in the seven days in January recall the panic - and the relief.

"When Martin Davis from BSI threatened to stop work it came as a cold shower," says Anders Kärrfelt at Ericsson Telecom's quality staff.

Everyone knew that internal reviews were demanded by ISO, but it was felt that it was only to be "sufficient." What that meant is not easy to determine.

BSI concluded that internal reviews were too seldom, and for BSI to grant certification to Ericsson Telecom a plan had to be drawn up fast.

As everyone would recall, resources were very tightly stretched, especially with the quality staff. That's why Bengt Holm, responsible for the certification project in T division turned to Programatic which already previously was linked with the quality review. Ulf Hammarberg was assigned to lead the project. The first step was to quickly develop a project specification for the QAT project (Quality Audit at T division).

Challenge

"If that meant a three-year job, I would have said no," says Ulf. But I saw the short time and the serious situation as a challenge.

"On November 7 BSI threatened to withhold certification and the 13th a project specification was drawn up," Anders recounts.

After discussions with BSI the project was approved and Telecom was certified. But in order for the company not to lose its certification the next time around the QAT project had to be carried out according to timetable.

"It was impressive to see how fast decisions were made," says Ulf Hammarberg. "There was no problem getting BTA approved or for getting resources for executing the tasks."

"One often sees Ericsson Telecom as a colossal entity, but it showed that when it is required things can move unusually fast when it comes to decision-making. All this showed me that there is tremendous potential for resolving problems."

Trained

During 1991 all departments in T division will be reviewed internally. Previously, the reviews were done by two persons from the quality staff, but now this is no longer enough. A number of internal auditors must therefore be chosen and be trained before April 30.

Remarks about internal reviews applied in the first place initially to T division, but similar problems exist elsewhere. In order not to be pulled up for the same thing the regions were also drawn into the job. Now the work is being continued in the subsidiaries.

Demands on the auditors were high. They

had to have long and extensive experience, good standing in the organization, be very effective in communications, have good balance and good judgement.

Thirty-two persons were asked, of whom five were women. All of them said yes.

"Today, I can say that there could have been more women," says Anders. "It was shown that they perform very well in the role of internal auditor."

More help

According to the project plan these 32 persons should have a theoretical education combined with job training.

"We realized that we did not have the possibility of administering the theoretical training itself," says Anders. "Hence, we got in touch with Sture Ögren at Ericsson Quality Institute."

"He understood the seriousness of the situation and Tony Boumer at EQI was released to help out. He provided the documentation, schema and conducted the first seminar.

"It meant giving a course as quickly as possible," says Tony. "Thanks to the procedure, which was based on the ETX methods, it was not so difficult to administer it. Moreover, it was fun to set up a course that

actually helped resolved customers' problems. That's how training should function."

Twelve of the chosen internal auditors gathered for the first seminar at the beginning of January.

Made tests

The biggest task for them was how the subsequent courses should be devised and carried out. Among other things, they had to set the examining tests which the incoming participants had to take.

It was three very hectic but fun days, which resulted in a very well functioning course for participants in the later groups.

The job training had two objectives. At the same time that the internal auditors were learning how an internal audit is conducted, departmental reviews were also being done. One could kill two birds with one stone. Moreover, the job training was the other, and most important, part of the examination.

Course in English

"Managers were well aware of the need for training. There was no resistance; instead, managers tried to help," says Anders.

On June 15, the first internal auditors were

certified, and several more are on the way. Several courses have been held, also in English, since soon it will be the subsidiary's turn to be certified.

Now, we know that Ericsson Telecom is on the right track when it comes to internal audits. The project has gone very well and the internal audits done have been approved by BSI.

Draws knowledge

How does it look for other business areas where audits are being done or will be done next?

"We know that similar situations exist within all of Ericsson, both in Sweden and at subsidiaries abroad," says Anders.

Tony Boumer says he has been in contact with other companies and he points out that the courses that were set up for ETX could very well apply to other business areas.

It is also very clear that BSI has placed demands on ETX that facilitate taking on the problem and resolving the issues of internal audits for other business areas.

Remarks about internal audits disappeared after the QAT project was presented to BSI. They took the project seriously and concluded that it was not something that

up Ericsson Telecom



to be approved by BSI. Today, Ericsson

"We want to have order and clarity"

Eva Salomonsson is one of the certified auditors. She is responsible for quality in the Nordic region and she replied resoundingly yes when she was asked if she wanted to be an internal auditor.

"I had experience of audits going back earlier and I see being able to review as part of quality work. With the training I saw the chance of enhancing my area of responsibility even more," she says.

For Eva, the training came in perfect time. She had thought of conducting internal audits in the Nordic region of her own.

"Now, it is much better," she says. "With the training in hand I know that it will be done the right way and the results will be better when we have paper saying that we are qualified to conduct audits."

Eva had no problems with job training. She knew what was involved. On the other hand what surprised her was the response from those being audited. They were more positive

than she had expected.

Eva doesn't immediately respond to the suggestion that women function exceedingly well as internal auditors. After a moment's consideration she said:

"Women are perhaps more natural and more careful. An auditor should be seen as a help to those who are being audited. Then it is an advantage to be seen as caring and not being mistaken as a threat."

"It may be the case that women react more when there is lack of order and are therefore more interested in the methodical issues. Interest for the ETX solution of internal auditing is immense throughout the entire Ericsson group."

"I have spoken with both ERA and EBC. I tried to help them and to share with them our



Some of the first internal auditors that were certified within Ericsson Telecom.

experiences before their certification. The same applies to subsidiaries in the Nordic area."

"Denmark will be first to be audited and I will go there soon to conduct an internal audit. It will be a kind of pre-audit, but this way we will have a chance to see how things are going before BSI turns up."

Flags fluttered against the cloud-free clear blue skies. The Spanish, Catalanian, Swedish, Swiss and EC. We are at the little mountain town of Manresa, 60 kilometers north of Barcelona, at the foot of the Pyrenees and with the holy mountain of Montserrat to the southwest. Festivities are on the way and busloads of specially invited guests pull up to take in the morning sun. Everyone waits with suspense for the President of autonomous Catalonia, Jordi Pujol, to land and thereafter to dedicate Ericsson's new factory for manufacturing optic fiber cable.

It is July 3 and the result of three years of hard work with planning, projects, construction and equipment. The finished factory, Fibroco S.A., is fully productive already. Now, the official dedication will take place.

New opto factory opens in Spain

At exactly on the stroke of 10, the president's car came speeding up to the main entrance. Jordi Pujol was warmly welcomed by Lars Berg, president of Business Area Cable and Network (BN), as well as by Julian Massa, board chairman of Ericsson S.A. and by the town's mayor, Juli Sanclimens in Genesca.

Among other representatives from Ericsson were Raimo Lindgren, president of Ericsson Telecomunicaciones S.A., Gerhard Skladal, BN director in Spain during the construction period, Jorge Garriga, who is head of the plant, Roger Runesson, vice president of Ericsson Cables AB (ECA) and project leader for the new factory, as well as Ake Petersson, BN's director for business development and union representative who is on the board of ECA. Also there was Karlerik Grip from Hudiksvall, who is responsible for the factory production.

The dedication ceremony begins and President Pujol goes around and greets nearby guests among whom were Sweden's ambassador, Ulf Hjertensson, and several top executives from Telefonica, the Spanish state telecommunications administration.

Before Jordi Pujol cuts the ceremonial ribbon, which today takes the form of a cable band in the Catalan colors, yellow and red, with an amazing 324 fibers, he says that the establishment of Ericsson in Manresa is proof of the foreign investors' confidence in Catalonia. He underlines that would not have been possible if the solid domestic industrial infrastructure had not been in place. Catalonia has very old industrial traditions.

Mediterranean forward
"Sweden is a small country that has succeeded in becoming an advanced country with strong industry," Pujol notes. He also congratulated Sweden on its application for EC membership and went on to point out that the Mediterranean area is a region in forward gear that needs the type of investment that Ericsson has just made.

Julian Massa explains that



Above: In the light, airy factory foyer there are only a few workers, thanks to heavily automated manufacture. Picture to the left: President Jordi Pujol (center) hands a piece of the dedication cable band (with 324 fibers) to Ericsson chairman Julian Massa.

those responsible for Fibroco have the mission of expanding in the direction of Europe. Here, there are conditions for modern installations and, moreover, there is tested experience and good economic and industrial relationships.

Important EC basis

"This is yet another investment to strengthen our presence in one of Ericsson's most important and largest markets, which moreover is in the EC area," says Lars Berg. "This significant investment in Catalonia is done for, among other things, to balance our strong position in Northern Europe with a support base in the south. Catalonia's geographic position weighed heavily in the decision to build here, both because of its proximity to other EC countries and to North Africa."

"For me personally this is a special delight. I came here for the first time 27 years ago to study Spanish, and I like the region's people and their culture. Now, we have come so far that the first new cable

factory we have built from scratch in more than ten years is right here," Lars Berg continues. "The Manresa factory can also serve as a model for similar Ericsson projects in other parts of the world."

Cable for 300,000 calls

After the ceremony and chats with the more than 300 guests that represented the entire society, it was time for President Pujol to officially dedicate the factory where all the machines and laboratories were already fully productive. He clipped the specially manufactured Fibroco band which at a low estimate can handle 300,000 simultaneous calls and declared the factory opened. At the same time, Catalanian Pablo Casals' enchanting "Concierto en la Casa Blanca" echoed throughout the entire factory and a guided tour of the plant was led by the manager Jorge Garriga.

Evening approaches, then night falls. Everyone can breathe easily after the successful dedication. The three German shepherds, Carmelina, Linda and Rock who are specially trained by their master José Alvarez take care of a calm night and a secure Fibroco S.A.

Text and photos: Thord Andersson



Above: In the light, airy factory foyer there are only a few workers, thanks to heavily automated manufacture. Picture to the left: President Jordi Pujol (center) hands a piece of the dedication cable band (with 324 fibers) to Ericsson chairman Julian Massa.



Everyone contributed to acquiring the most modern equipment to be found on the market.

Here is found the latest technology

The more than 4,400 square meter factory on an almost 30,000 square meter large lot in Manresa's new Bufalvent industrial zone is the most modern unit of its type in the Ericsson group. Moreover, it is the only one that from the beginning was designed for manufacture of fiber optic cable.

It involves an investment of about 80 million kronor. The investment was made in collaboration with the Swiss Cables Cortaillod, which has a minority share of slightly more than 30 percent.

"Nothing was spared when it came to getting the best possible equipment and the most modern labs which today are specially geared to this type of manufacture," says project leader Roger Runesson. Besides, several of the machines are made by Telecab division's factory in Hudiksvall, he noted.

One year's construction

"It is impossible in these columns to name all the enthusiastic colleagues who over

longer or shorter periods of time in Spain were involved in planning and construction of the new factory," says Roger Runesson. "But without their hard work, often under deadline pressure, we would never have been able to complete this project."

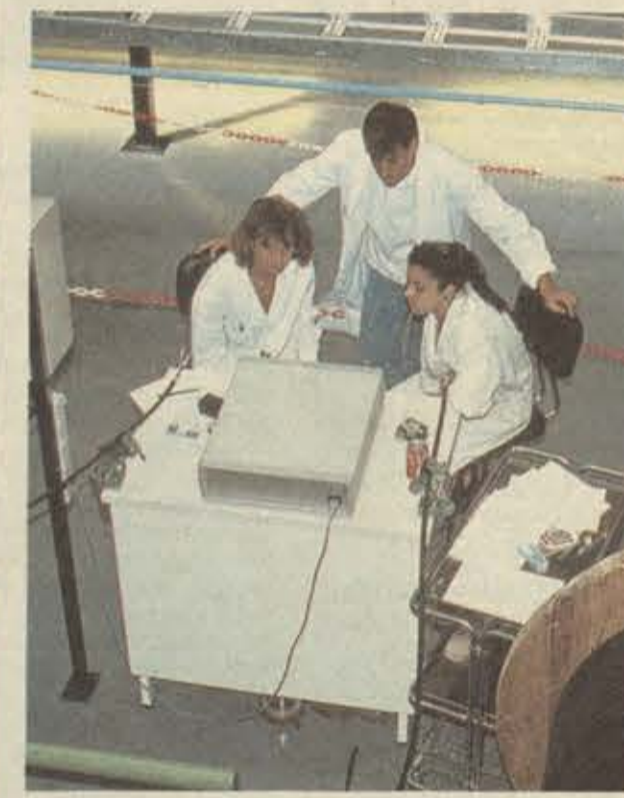
"We first broke ground in the spring of 1990 and already during May this year production was under way only two weeks later than planned," says Gerhard Skladal. "I think that is really fantastic. It took only ten months from putting down the first brick up to full production. In this context I would like to specially mention Stig Larsson's input with planning and equipping of the factory," Skladal added.

Organization and manufacturing methods, among them, a very advanced data base system, DEHLFI, was brought from Hudiksvall. With the help of DEHLFI, all the product factors can be controlled and customer desired cable types can be manufactured.

Thanks to the heavily automated



Julian Massa, Jordi Pujol and Lars Berg on tour of the factory.



Laboratory for production control is an integral part of the manufacturing process.



The strict and elegantly designed factory lies in Manresa's new industrial zone, Bufalvent.

manufacturing process the required personnel is just 50 persons, of whom 20 are university educated. Most of them, moreover, were educated in Sweden.

Cables already sold

Cables can be manufactured with up to 128 opto fibers. The present annual capacity corresponds to 100,000 fiber kilometers per year. Already from the start, there were

resources for manufacture of all types of cable according to Telefonica's norms. The objective is naturally to have Telefonica as customer, but initially manufacturing is chiefly for export. The cable that we began to manufacture when production got under way in May has long been sold and will be delivered to Saudi Arabia. Turnover for Fibroco for the next year is reckoned at just over 100 million kronor.

CATALONIA IN BRIEF

Province in northeast Spain with full autonomy since 1978. Six million inhabitants who speak Catalan. Capital is Barcelona, which with 2 million inhabitants is Spain's second largest city. Catalonia accounts for one-fifth of Spain's GNP. The flag, with four red bands and a yellow background, is from the 800s.

A woman at the top of the technology world

In the midst of the male-dominated world of technology, a woman stands out.

"It is a pity that we are not more," says Inger Högberg, head of Future Products at Ericsson Components power division.

To the question of how it came about that she is an engineer, she replies:

"I don't remember. I must have put the wrong cross on some application form."

Inger Högberg, 38, is one of those involved in the future of power.

She is tough, cute, womanly, with a strong and beaming appearance and a deep knowledge and very involved in her work. Inger is head of a section in product management in Kungens Kurva, which is known as Future Products.

"I am head of something that does not exist as yet," Inger says. "Here we devise the new current transfer products. The market determines our choice of technology and it is the customers' needs and the trends in telecom that guide us."

Strong will

It is probably, among other things, Inger's quest for order and organization and a strong will to be always where something new is going on, that has driven her to the position she has today. A large amount of vision has given Inger the possibility of seeing and influencing events early in the company.

The present products department – a link between sales and development – is to a considerable extent part of her job.

"Despite everything, there is still a belief that we women have to be a bit better. In certain countries in particular it is hard to be accepted as a woman."

For some years Inger was head of a group, which trained customers from all corners of the globe in the use of power equipment. She was

greeted then with a lot of mistrust and in the beginning many were reluctant to listen to her and take her seriously. But when they recognized the depth of her knowledge they accepted her and she had a chance to penetrate even deeper into their culture.

In her job Inger has had a lot to be glad about in terms of getting to know many different cultures. Earlier, Ericsson directed its interests to the not so rich nations. Today, it is Europe and the U.S. and the demand picture has changed.

"Previously, we could tell the customer what he needed. Today, it is the opposite. The customer talks about his needs and he decides what he wants."

Advantages

There are many advantages in being a woman in a male-dominated world.

"First and foremost we appear very well and we are remembered. It is also an advantage when I need information. Then, they all take it for granted that I need a bit more explanation. And a woman can ask dumb questions. Men tend to be more prestigious."

"We also have certain advantages as managers, for perhaps we can speak more easily with the person behind the resource. A woman does not have as much armament around her as men do and as such she finds it easier to talk about feelings."

"But in the end I'm against generalizing. It is people that matter, not what sex they are. I would like to see a natural mixing of men and women, where we collaborate and complement each other as individuals."

How do you explain the fact that there are so few women in technology?

"Eventually, that depends on us ourselves. That we do not dare or do not want to enter this male domain – a trend that is now being reversed. When more women choose professional training we will also see more women managers."

Text: Inger Bengtsson
Photo: Maria Petersson



Inger Högberg does not care to generalize about men and women. "I would like to see a natural mixing of men and women where we collaborate and complement each other as individuals," she says.

Mobile telephone rescues sailors

The Swedish motorboat was on its way from Sweden to Skagen, Denmark, when a large crack opened up in the hull and the boat began to sink. The two Swedes on board were saved at the last minute by the Coast Guard in Gothenburg. Thanks to having a mobile phone aboard.

When the two men realized that the boat was about to sink they instantly called a friend on land who in turn got in contact with the Coast Guard. They decided the situation was critical and got in touch with the Danish Coast Guard in Århus, which sent out a helicopter from Ålborg and two rescue boats from Skagen.

The Coast Guard in Gothenburg also established telephone contact with the two men

in the boat, a contact that was maintained for more than half an hour before the connection was broken. The Coast Guard then took it that the Swedes were in the water.

The rescue operation was complicated by the fact that the Swedes could not give their exact location, but immediately before contact was broken they recalled that a large ship had passed near them. This way, the Coast Guard was able to pinpoint their position. Shortly before their motorboat disappeared in the deep its lanterns were spotted by a helicopter which directed the rescue boat to the spot.

Shocked but unhurt, the men were taken to a hospital in Skagen. Grateful that they had a mobile phone with them and that the NMT network functions so well.

Talking carphone

"Good morning. You got three calls on your mobile phone. Have a nice day."

This is how a new Danish mobile phone greets its owner as soon as he or she switches on the ignition in the car. The phone says "good day" between noon and 6 P.M. and "good evening" later in the day. When the current is interrupted after a long day's use, the phone gives out a little "sleep tight."

Behind this friendly phone is the Danish company Cetelco.

Mobile phone can alert firefighters

Yet another complication with mobile phones has cropped up in Falkenberg, Sweden. Earlier, medical equipment and airline traffic were seen as threatened by the ever ubiquitous mobile phone. Now, it appears that the fire department is also affected.

It was at Grand Hotel in Falkenberg that a newly installed fire alarm was triggered by radio waves from mobile phones. In many instances, the alarm went off, both at the hotel and at the fire station. The incidents certainly caused a huge uproar with panicking guests and the unnecessary fire engines on the scene that followed.

The cause of the incident was guests who were using their mobile phones in their rooms. That's why the hotel asks guests not to use their phones in the rooms. An effective way to come to grips with this problem would definitely be to lower the costs for calls made via the hotel switchboard....

Mobilizing for new Oman expansion projects

Now it's time again to get going with expansion of the tele network in Oman, a job that has been going on since 1985, when Ericsson Network Engineering AB (ENS) got a huge turnkey project in the country.

In summer, there was an increase of 100 million kronor and with that we have, since 1985, supplied tele equipment to Oman for more than a billion kronor. Of the current order, the BN part is worth about 60 million kronor, to ENS credit.

The rest is for AXE exchanges and upgrading of the existing AXE system. About 12 million kronor is for fiber optic cable that will be delivered from Ericsson Cables Telecable division in Hudiksvall.

Since 1989, when the first large increase came, Sune Larsson has been project leader and as such also head of the technical office in Oman (TKO). The execution of the project itself is coordinated by Sune Larsson as project leader and with Bertil Rauschenbach as coordinator with ENS in Stockholm.

"This is one of the few places where Ericsson supplies and installs complete plants, including switches, fiber optics, radio links, outside plant, and also installs phones direct to subscribers," says Sune. "We can supply a fully func-

tioning tele system from switch to telephone set in a package solution, totally in keeping with BN's business idea."

Turnkey project

That calls for good planning, design and prompt delivery. All the pieces must be in place at the right time and must be able to be delivered according to customer demands. In Oman, they want to buy services to be able to telephone, and that is what we can supply as a finished turnkey project.

"I take the present increase we got as a sign that we have risen to

the extensive demands of the customer," he continued. "In Oman, we work in about the same way as in the huge Saudi project, where I was involved from January 1978 to January 1982. Then I was responsible for the project including local networks and exchanges construction," says Sune.

New concept

He has been working abroad for more than 25 years. He has been in Sweden for only two years since 1963.

In Oman, we introduced a new concept for land networks. We

replace some of the conventional expensive connection cables with minilinks and transmission equipment of the RSM type (Remote Subscriber Multiplex).

This way the network becomes more cost effective. This method suits, for example, smaller villages with up to 120 subscribers. On long-distance stretches we lay a 12-fiber opto cable. This involves about 80 kilometers in terrain that is not at all easy to penetrate.

It is ENS's Technical department, under the leadership of Heinz Karl, that is responsible for the project's transmission section.

The Oman project is in good hands. Sune Larsson has been there since 1989.

"Oman is a tough country to work in," says Sune. "The torrid heat and high humidity is oppressive and the geographic distances are long and far from unproblematic. There are a lot of mountains and the lesser country roads are often in bad shape. But the principal roads are remarkable."

Mobilize in the fall

"At the height of operations in 1990 we were some 150 workers, including subcontractors. Right now we have only about 30 persons on site and no subcontractors. We will mobilize in October and November and during the spring of 1992 I expect we will be around 150 persons again."

"The entire project will be finished and in operation for November 1992. We can manage it with good planning and hard work. A number of new projects will be available and we are interested in winning these," concludes Sune.

Thord Andersson



Emmen says thanks with a sculpture

A gift from the Dutch city of Emmen and the province of Drenthe was presented to the city of Stockholm. The gift is a 4.5 meter high sculpture which on May 27 was placed outside Electrum in Kista - "The Image of Communication."

It was during a Dutch export delegation's visit to Stockholm, May 26-27, when Emmen's mayor, A.H.A. Lensen, chose to hand over the sculpture to the city of Stockholm. This way, Emmen wanted to show its appreciation for the Swedish company that made jobs possible for its people. Among these, Ericsson's new people pager factory. After the official handover at the Vasa museum in Stockholm the entire delegation, among which Ericsson in Holland was represented, headed for Electrum in Kista to see the sculpture in its setting.

The artist, Willem Kind, was also there, together with his wife and five children.

Willem has chosen to give the sculpture the name "Emmen's Ambassador." It is just over 4.5 meters high, weighs 220 kilos and is made of Swedish stainless Avesta steel. "The Image of Communication" is the subtitle of the sculpture, representing a person communicating cordless.

"I work happily with paradoxes. At



the same time that it shows cordless communication I have deliberately made use of cables and "cords" which I have welded together," says Willem.

From now until the new Electrum is finished in about a year's time, the sculpture has been given a temporary place in one of the corners of the parking lot. But as soon as the building is ready it will be moved into a more prominent place, between the old and new Electrum.

Helena Andersson



Here, they manufacture preforms, from which more than 40 kilometers of fiber is produced. The Technical director at Network Products, Yngve Hässler (far right) demonstrates a run for editor in chief Shao Huaze, ECA/VD Lars Berg, a Chinese interpreter, editor Sun Yongren, editor Gu Yaoming (Stockholm correspondent) and editor Zhu Jingruo.

Chinese on tour

Through the auspices of the Swedish Foreign Office, Ericsson recently received a delegation from the Chinese People's Daily, which is published in Beijing.

In the program, there was a demonstration of fiber optic technology with a visit to the laboratory for manufacture of glass preforms, something that was deeply fasci-

nating for the visiting journalists, headed by their editor in chief, Shao Huaze.

The People's Daily is one of the world's ten largest dailies with a circulation that exceeds four million copies per day. We hope that we shall soon see a report on Ericsson Cables in Sundbyberg.



Test flight at FMV: Tests in Malmslätt outside of Linköping were conducted during all of August, three to four times a week. Photo: Åke Andersson and Pia Ericsson

Successful liftoff for new radar

The airborne radar PS-890 has flown and project manager Gunnar Högberg can relax. Now when the critical stage from measurements and tests on ground to the same thing in the air are completed, the tension drops a bit. Evaluations are obviously not ready but the results are very positive.

"Now it's a matter of rolling up our sleeves and continuing with serial work as far as resources will take us."

The government has given FMV, the Swedish war matériel agency, 215 million kronor for the continued development of PS-890.

Development work

After the successful test flights at Malmslätt in Linköping during June and August, the project is now leaving the testing stage that began in 1985. When the evaluation of the tests is ready, a further order is expected from FMV, which assures development work

over the next 15 months. ERE is reckoning with an order of two pre-series editions in the middle of next year. In total, PS-890 calls for between six and twelve equipments for FMV's part when they talk about serial manufacture in a few years.

Ongoing process

The test flight success does not mean that one can take it easy and rests on one's laurels. Development work is a steady ongoing

process. During the test flights, two tape recorders registered data which is later fed into computers on ground. Now, design work is continuing to complement equipment so that one can have complete signals handling in the air and images on a radar screen.

"From a demonstration point of view this is important for export clients," says Gunnar Högberg.

Foreign interest, from among others Australia and Singapore, also need large scope. That's why transmitter/receiver cassettes in radar antennas are being continuously developed.

In each radar, there are some 200 of them and those that are placed in the radar will eventually be found on the market and will have at least twice as much effect as the test radar.

Gunilla Bergman

Million contract

Recently a contract worth 100 million kronor was signed between FMV and Ericsson Radar Electronics in Mölndal for continued development of the airborne radar PS-890.

Development work is thereby assured for Ericsson from now until the turn of the year.

"The project is so interesting and promising that it should go on," was Defense Minister Roine Carlsson's comment when the decision on continued development was announced by the government earlier in the summer.



Anders Lindberg is one of those working with testing of PS-890. Here, he deals with some of the equipment inside the aircraft.



After the flight, operators handed over the data tape with radar video and flight data for evaluation on ground. In the picture, from left, Rickard Nilsson, Anders Lindberg, Thomas Borg, Johan Carlsson, and on the way out of the plane pilots Rolf Carlsson and Sven-Olof Westerlund.



Finland is one of the countries where a chain of dealers is being built up. The three dealers in Helsinki that were set up in summer are off to a good start.

Network's route to increased sales

In every country there are small and medium-sized companies, likely purchasers of telephone switches in the BusinessPhone family. One way of reaching more of these smaller companies with Ericsson's inviting and broad customer base is to build up a national network of dealers.

Market conditions have changed and it is well for us to use this to the fullest advantage. That's why Ericsson is working to build up a national network of dealers for the BusinessPhone family, the smaller business switch.

"That is the only way to sell smaller switches in large volumes," says Ted Venables, International Dealer Development Manager in the small systems division in Ericsson Business Communications.

"Simple direct sales is too costly and we reach only a limited part of the market with our own salesman."

"That is something that most of the close to 30 competing suppliers have discovered. Now they are also competing for the best dealers."

"We want to build up a network of independent companies, small and aggressive," says Ted. "On average, the network will cover 15 to 20 companies per country."

In Belgium, there is already one such that sells BusinessPhone, with excellent results. In February, sales began in Britain and one month later in Spain. Many other countries are on the way.

"Our goal is naturally is for

*Local
dealers
bring
success
to Business-
Phone*

dealers to sell only Ericsson products," says Ted. In many cases, though not all, that is the case.

Mutual support

There are many reasons why Ericsson works actively with its dealers. In the first place it reassures the dealers with support in such things as training, marketing and PR ma-

terial, before they finally choose to sell the products.

Here, the overwhelming concept that is developed for BusinessPhone is most meaningful.

"Dealers are convinced about the chance of showing a professional, convincing and united profile," Ted says.

Secondly, Ericsson wants to make sure that the dealer does not misuse the Ericsson name and reputation, and motivate him to be an exclusive dealer for Ericsson.

Hence, EBC has devised a two-day course for dealers, the BusinessPhone Dealer School. Depending on needs, it is run by the local company in the respective markets. The premier one opened in England in May. The first day was given to "Ericsson knowledge" as well as practical marketing. The second day took up economics and finance.

Keeping customers

Knowing one's customers is very important in the long run.

"How we would manage that was an important question," Ted notes. However, it appeared pretty easy to resolve this problem.

Normally, dealers must register all customers with the local company on the market, since they have agreements with Ericsson for more advanced services and guarantees on switches do not apply if Ericsson does not know the customer.

This way, each company that installs a BusinessPhone becomes an Ericsson customer, regardless of from whom he buys the switch.



In BusinessPhone Dealer School dealers learn how to use the comprehensive PR material for the BusinessPhone concept.

Ericsson's private network gets even larger

Additionally, five Swedish sites and three countries have hooked up to Ericsson Corporate Network, ECN, Ericsson's private international network.

Since 1984, Ericsson units in the Stockholm area have been hooked up into the common private tele network, based on MD110. The network is expanding now that Ericsson units in other parts of Sweden and abroad are being hooked up via leased fixed connections with high capacity, 2Mbit.

In Sweden, Söderhamn came first. In June this year, Norrköping was hooked up. Karlskrona will soon come in and thereafter Östersund and Mölndal will have their turn.

During August, Ericsson offices in England, Ireland and Holland were hooked up to the network with 2Mbit lines. The U.S. and Australia have previously been linked up by lines with lesser capacity, 64 Kbit.

"In the first place it is the quantity of traffic to and from the sites that determine in which order they are hooked up into the network," says Stig Lindström, responsible for telecommunications in the Ericsson network at EDS, Ericsson Data Services.

Covers whole world

When it concerns data communications, which is based on ERIPAX, Ericsson Corporate Network already today covers in principle the whole world. By integrating MD110 and ERIPAX, voice and data, these lines can now be used more effectively.

All internal communication between the connected units goes

over the network, voice, text via fax, videoconference as well as computer. Thus, the Ericsson network is a good example of the Business Network, EBC's concept for communications solutions directed to larger customers.

It is Ericsson Data Services, EDS, that runs and administers the network, so one can say that the company is Ericsson's "Televerk," a reference to Televerket, the Swedish tele administration.

EDS sends tele invoices to the network-linked units and takes care of contacts with Televerket, agreements, payments etc.

Calls for 33 million

Each year calls are made for more than 33 million kronor from the 20,000 telephones at Ericsson's various offices and plants only in the Stockholm area. Most likely, the sum would be equally large for calls being made to the Swedish capital. Beyond this there are costs for computer communications and mobile phones.

"In the end, the private network will mean lower tele costs for the company," says Stig.

He points out that perhaps an even more important advantage in having a private tele network is that we can maintain a higher level of services for ourselves with, among other things, shorter delivery time for lines. If, for example, an additional computer line is needed between two places we can take care of it ourselves in our switches, quickly and cheaply without having to go through Televerket.

"This way we can hook up lines even for shorter periods, for example for a specific project, at reasonable costs," says Stig.

Accesscodes simplify internal calls

A simple and diligently used manner of calling internally in Ericsson is using the short number to different units that are found in the internal telephone catalogue. Ericsson Corporate Network furthermore enhances the opportunities for simple internal calls. With help of a direct number it is possible to call the switchboards at the units that one is seeking in the internal network as well as to reach the person one is looking for directly.

The direct number works with the help of so-called access codes (see accompanying table). Access codes function like an internal area code.

New internal number

For the internal number to work everywhere, those have been changed in certain units to adapt to Ericsson's number plan. As a rule, the change means that an additional digit from the external number is added to the earlier three-digit internal number. (For example, the Karlskrona number 0544-54703 can now be reached with the access

What you do:

If you want to call Head Office in Stockholm, this is what you do:

1. Call the access code for Stockholm — 850.
2. Then the last five digits in the external number (in this case 719 00 00 you take 90000) or, whichever is easier, accompanied by the internal number to Head Office switchboard, "09". Thus: To reach Head Office 850 90 000 or 850 09.

code 864+4703. The number 4703 replaces the previous number 703 in Karlskrona.)

Changes in internal numbers affect only internal traffic.

In certain units in the internal network external numbers to other units within the network are now barred so as to direct traffic to Ericsson's own network. So it is not possible to call Head Office on 08-719 0000 but instead you are obliged to call the direct number 85 009 or 850 90 000.

Maria Rudell

PUB's personnel on the move

"There are more and more demands for mobility among staff," says Mats Persson at PUB, which is now undergoing tremendous change toward the "department store of the '90s." Mobility calls for mobile communications and this has been achieved since the start of the year with the help of a specially adapted people paging system from Ericsson Paging Systems AB.

At the PUB department store in Stockholm, there are about 700 employees working in an area of 5,000 square meters. On several floors and in different buildings.

Previously, those on the move maintained house contact via a cordless system with two-way communications (where one could speak in both directions). But the system was not extensive enough in coverage, that is conversations were broken off too often.

At the start of the year, PUB switched to a people paging system from Ericsson. Three transmitters from five antenna sites covered the entire building complex. (The store actually has as many floors underground as above and there are three floors under Hötorget itself). Every seventh employee, that is about 100 persons, carry a pager. It can be managers, goods receivers, security services or others with special jobs.

Many functions

People pager system Contactor 9000 has many functions. The pager itself has a display (a window) with room for 32 characters divided into two lines. One can (naturally) retain messages. Up to eight can be stored in each memory (there are three memories, a call memory, a "notebook" where you can shift messages and a mailbox memory). If a ninth message comes through to the call memory it

For the '90s stores, it is pagers and "offices in the pocket"

pushes out the earliest one. The system's nerve center is located in a terminal in the telephone switch. Messages are sent out from there. Moreover, it is possible to program about 100 different standard texts. Like "meet in the guest dining room in 15 minutes," etc., or to machine crews "the second floor escalator has stopped" etc. You can send out standard messages yourself and do not have to burden the switchboard operators.

An important function is group messaging. The possibility of sending texts to specific groups.

MARKET LEADER

PUB's system, Contactor 9000, is sold by Ericsson Paging Systems AB, which has some 30 employees and offices in Stockholm, Gothenburg and Malmö. It is sold mainly to large and medium-sized companies, above all to industry and hospitals.

Ericsson is a market leader in Europe when it comes to sales of local people pager systems. In Sweden, its biggest competitors are the Swedish Tateco (Gothenburg) and Phillips.

Ericsson Paging Systems AB (with head office in Mariefors, Stockholm, Tel. +46-8-726 35 00) also sells the office phone DCT 900 as well as the Axxess receiver for Televerket's nationwide people pager network, Minicall.



"Our personnel often leave their places but must still be reachable," says Mats Persson at PUB, which just acquired a people pager system from Ericsson.

Or with evacuation of the store to the collective staff. Another is various alarms. If an elevator or a fan stops an alarm is sent to a computer where the responsible individual can be reached on his pager. (The system has the capacity to send the alarm directly to the serviceman's pager.)

The people pager system is also ideal for two employees that are deaf. They have pagers with vibration functions. They can be reached in the event of a fire alarm and they themselves can message back their surroundings. A widely used service is that one can set

one's phone so that incoming calls can be automatically connected to the pager. This way one can move about freely in the house and still be reached if someone is on the phone to him.

At PUB, about 3,000 calls a day go through the switchboard. A large portion of these are connected to the pagers. The most difficult loading is in the mornings.

What do they think of the system then?

On the whole it works fine. The bulk of the messages are text or coded standard messages that reach the pagers and stored in memory.

But when it comes to calls from outside, for example for those working with transport or moving

between different departments in the building, it can be difficult to find a phone to take a call. And if you are in a paternoster elevator, well...

"We are working on improving that detail," says Rickard Magnebrant from Ericsson Paging Systems AB. "Among other ways, by letting the switchboard 'tell' the external caller that the call is being connected to a people pager so that he does not hang up too quickly."

"Maybe, we will never get the completely perfect system," but this works just fine, says Mats Persson.

Text: Lars Cederquist
Photo: Karl-Evert Eklund

Ericsson goes to hotels

The hotel branch is a growing market. Needs, ownership structure and decision making distinguish it from other market segments. In order to provide Ericsson salesmen with more knowledge about this other world, Ericsson Business Communications has set up a seminar.

At first sight it may appear a somewhat unfortunate time now to be investing in the hotel industry, when there is a global recession and the travel sector is having immense problems. Jacqueline Hey, product manager for MD110, HT, thinks otherwise, however, and she feels that this is the right time to look at this segment.

"Hotels are very cost conscious. It is we who must show them how they can save money."

And in spite of economic difficulties this is a growing market all over the world and will continue to be so, according to research.

It's now time to think of Ericsson's long tradition as a supplier to hotels. The ASB 900 switch was sold in 27 countries and was a huge success. However, it has seen its years and many customers are thinking of changing it.

Sales organizations in the local companies showed immense interest in the seminar, which was arranged in Amsterdam in conjunction with B and K divisions.

Right person, right time

Typical for the hotel branch, among other things, is the highly changing ownership relation: national or international hotel chains owned by companies of different types, franchising-based chains, privately owned free-standing hotels. The variations are endless.

This makes it difficult for salesmen to know who should be contacted and who makes the final

decision. It can be someone at head office in New York that decides on a telephone switch for a new hotel in Barcelona. This calls for a lot of collaborative work among the local companies.

Another difficulty is to know when one should establish contact since the decision-making process varies very much from case to case. Knowledgeable guest speakers shed light on different angles, among them this particular problem.

André Charrière is secretary general of the International Hotel Association. Members of the organization are partly hotels, partly suppliers to the branch.

Ericsson belongs to the latter category and as such can get a lot of information and services through the organization. Larry Callaghan, from Bri-

tish BassInc., outlined in great detail the decision-making process in the branch, with special emphasis on what he himself would expect from telecom suppliers.

This is really worth paying heed to since the giant company Bass recently acquired Holiday Inn, the world's largest hotel chain. As Information Technology Manager, Callaghan is chiefly responsible for purchase of tele and computer communications equipment for the chain's 1,650 hotels.

It is becoming more common for international hotel chains to choose to conclude global purchase agreements with one or two suppliers for longer and closer collaboration.

This way, among other things, they can offer their guests the same level of standards and services in all countries.

The hotel seminar was the first of a planned series on sales activities, aimed at certain segments, divided according to markets.

"It is more effective to concentrate resources on a specific segment," says Jaqueline.

"By learning about the customer's operations, his attitudes and his communication needs, they can be cultivated in the right way."

Maria Rudell

ERICSSON IN THE HOTEL INDUSTRY

Ericsson can offer two business switches that meet the hotel industry's special needs, MD110 HT and BusinessPhone 150 Hotel. MD110 HT is an advanced system, developed by the Australian subsidiary, that suits larger sophisticated business hotels or first-class tourist hotels with more than 150 rooms. This has been on the market for close to three years and is sold in some 20 countries. BusinessPhone 150 Hotel suits smaller hotels, up to 150 rooms. In principle, it has the same functions as the larger system. The smaller switch was launched in 1989. Both systems are equipped with display that give hotel staff information about guests and can be hooked into the hotel computer. This way, one achieves an efficiently integrated administrative and communicative network.



The church rowboat contest, Siljansrodden, is a popular summer activity. Ericsson products are part of the communication equipment that contest organizers use.

HotLine telephone on radio

What do you think of Mora as a summer resort? The reporter from Mora Summer Radio stuck out a small microphone to his interview victim. In the reporter's ears are earplugs and in his pocket he has a mobile phone. This is the way it is, as part of handy reporting equipment, the latest HotLine model hands free is being used on radio channels by Mora Summer Radio.

It was at the auto show at the Älvsjö fair in Stockholm in the spring that Ericsson presented two new additions – the wine-red low-priced version of its HotLine pocket phone as well as hands free equipment. With this it is possible to speak into the phone and have both hands free at the same time.

"For us, hands free mobile telephony is ideal, especially when we are transmitting outside the studio, and we do that very often," says Anders Bud, recreation leader, radio enthusiast and the person re-

Pocket phone ideal for nearby radio reporting

sponsible for Mora Summer Radio. "We did not have any big 'adjustment' with HotLine for Mora Summer Radio to use it in its transmissions," says Peter Pellams, branch manager for Ericsson Radio Systems Sweden AB in Mora.

The only thing we did was to move the little microphone lower down the cable. This way, it is

easier to use the microphone in interviews.

It was five years ago that Mora Summer Radio began its broadcasts. In summer, it transmits between 9 A.M. and 5 P.M. The transmissions are sent on 94.1 Mhz and it covers the commune of Mora.

"We have upwards of 25,000 listeners, both Mora inhabitants and

naturally many tourists," says Anders. "Through an information pamphlet at the tourist office and in camping sites tourists get to know about Mora Summer Radio.

A standing part of the radio program, apart from lots of music, is the tips on events as well as a half hour from the employment agency on availability of jobs.

Every Sunday there are church services. "Let's celebrate with him/her" is another program that runs every day.

Communications man

The day Ericsson's emissary visited Mora Summer Radio, the day's choice for celebrating was Djos-Hans Mattson. Some 22 years ago he was very active in the Vasaloppet marathon, where he handled communications.

Now in the summer he was taking care of communications with the traditional church rowboat contest Siljansrodden, which is organized in different places around Siljan. On the summer radio he spoke of the 18 boats that would take part in the contest that evening at the starting point near Rättvik Church.

After an interview that was conducted with a HotLine, Djos-Hans recounted that a lot of the communication equipment in both the Vasaloppet and the Siljansrodden came from Ericsson.

The unique thing about Mora Summer Radio is that the editorial broadcasts are unusually extensive

and the staff is quite young. Most of them are 16-17 years old and none of them has professional radio training. Outside the "radio house" near Mora's center, are the reporters cycles. None of them are of driving age and so it is cycle or their legs that take them out on assignments.

"The commune contributes money which goes to paying salaries for the youths," says Anders. "It is a very popular summer job and of the 40 applicants only 20 are selected. Job assignments are rotated so that a reporter one day can be a broadcast anchor the next day.

Phone in the pocket

Andreas Idfeldt and Pamela Johansson, two employees with Mora Summer Radio, went out to conduct short interviews with strollers in the pedestrian mall.

"Compared with the regular broadcast equipment that one has to lug on one's back, the HotLine is really neat to take along. It fits nicely in a pocket, they say. Also, people do not get nervous when you hold the little microphone before them. They hardly believe that they are involved in a radio broadcast."

"A mobile telephone is remarkable as a work tool for a radio reporter," says Anders. He himself used it with the Postal Open cycle race and with his non-sports reporting. HotLine can be used for a lot.

**Text: Gunilla Tamm
Photos: Karl-Evert Eklund**



Djos-Hans Mattson is interviewed by Anders Bud on Mora Summer Radio. Instead of the usual, more cumbersome reporter equipment Anders uses a hands free pocket phone.

Telephones on the black market

In New York, the police are confronting a new kind of criminal. They are drug addicts and other shady individuals who are doing a brisk business in stolen mobile phones. One business approach is to sell cheap overseas calls to immigrants in New York. In cars that are constantly changing parking spots customers can call home for about ten dollars. One gang that organized such calls was recently seized by the police. Their illegal "phone company" had hauled in thousands of dollars. Stolen mobile phones is hard currency for drug addicts. For 1,000 to

5,000 USD one can buy a phone that can be adapted so that it functions in a mobile network without the police being able to trace it or tap into it, since the number is constantly being changed. The technology is sophisticated. The microchip in the phone is replaced by a "trick" chip which is programmed so that the phone's electronic serial number changes with every new call.

In the U.S. mobile switches work in such a way that the first call from a new phone is never billed. A phone that is constantly changing number becomes a free phone, in other words. The crime costs tele

operators more than 100 million dollars, only for the first half of 1990, according to the companies' own calculations.

In the Nordic countries this type of crime is impossible. Since all mobile switches here are collectively connected to the NMT system, one cannot call without a valid number.

On the other hand, it is possible for computer-oriented people to program into an already existing phone. This is called "cloning" and it involves borrowing someone else's number, so that the call comes in on another's subscription.



From left, Jan Wäreby, Ericsson's marketing director for mobile phone systems in the Nordic countries, East and Central Europe, and Yngve Zetterström, project leader at Televerket Radio, make the first GSM call, which went to general director Tony Hagström. Photo: Peter Funck/Televerket Tryck & Bild

First GSM call

On July 1, Ericsson heralded a new epoch in European mobile telephony, when the first network with the new digital mobile telephone system, GSM (Global System for Mobile Communications) was ready. It applied to pioneer countries Sweden, Finland, Denmark and Germany.

Up to now, 15 countries have decided to introduce GSM and Ericsson is supplying equipment to 10 of these.

The world's largest GSM network is being built up in Germany, the D2, which is run by Mannesmann Mobilfunk. The mobile system switches, AXE switches and

more than 100 radio base stations now cover Germany's most densely populated areas and major cities like Berlin, Frankfurt, Düsseldorf and Hamburg.

For Televerket Radio, July 1 was the start for test systems for GSM. Tests are now being conducted in Stockholm and later in the fall also

in Gothenburg and Malmö. After a testing period of six months the system will be ready next year for the first subscribers. Almost exactly ten years ago the NMT system went into operation in the Nordic countries.

Ceremony

At an informal ceremony at Televerket Radio's offices in Stockholm the first GSM call was made. Tony Hagström, Televerket's managing director, who happened to be at Arlanda Airport, received the first call.

Gunilla Tamm

GSM CONTRACT

Success for Ericsson

The GSM network's business structure has been clear for a long time now and suppliers of equipment have fought hard to grab some of the pie for themselves.

Ericsson has fought well and has contracts in no fewer than 10 of the 15 countries. A couple of countries and several operating companies have still not placed their orders, so there can still be even more successes.

In most of the countries, the authorities have chosen to grant operations responsibility to two competing operators. In most cases it is a private consortium that competes with the national telecom administration.

Also, suppliers have formed alliances to be able to benefit from each other's technologies and traditionally strong domestic markets. One of the more successful is ECR 900, which comprises Finnish Nokia, French Alcatel and the German AEG.

As seen, Ericsson has been successful in getting orders for the GSM network. The description "tele administration" can be a state authority or a company that is entirely or partly privatized.

Suppliers to GSM:		
Country	Operating company	Supplier
Belgium	Belgian RTT	DMCS 900/Siemens
Denmark	Danish Televerket Private company	Ericsson
Finland	Finnish Televerket Radiolinja	Ericsson/Orbitel ECR 900/Philips/Siemens
France	French PTT SFR	ECR 900/Orbitel/Matra/Ericsson ECR 900
Greece	Private company	
Holland	Dutch PTT Private company	ECR 900
Ireland	Irish PTT	
Italy	Italian PTT Private company	Ericsson/Italtel/Telettra/Alcatel Siemens/OTE/Marconi
Norway	Norwegian Televerket Private company	Ericsson
Portugal	Portuguese PTT	Siemens
Spain	Spanish PTT Private company	Ericsson/Motorola/Matra Telettra
Great Britain	Racal Vodafone Cellnet	Nokia/Ericsson/Matra/Orbitel Motorola/Nokia
Sweden	Swedish Televerket Comvik Nordic Tel	Ericsson Motorola/Siemens
Switzerland	Swiss PTT Private company?	Ericsson/Matra/Philips
Germany	Deutsche Bundespost- Telekom Mannesmann Mobilfunk	Siemens/ECR 900/DMCS 900 Ericsson/Siemens/Philips
Austria	Austrian PTT Private company	ECR 900

Source: Communications International June 1991.

OUTLOOK

BY MATS HALLVARSSON

A digital anti-klimax

This summer the common European mobile telephony network should have been inaugurated with common services from 26 different companies in 15 different countries. Critics are talking about a near fiasco when neither telecommunications manufacturers, administrations or telephone companies have been able to keep to the timetable.

By the first of July this year it was thought that a motorist with a mobile phone could travel up and down Western Europe and conduct his business by phone and talk with his loved ones back home across all borders.

That's how GSM should work, the prestige and symbol-filled mobile telephone project that is now being hailed as Global System for Mobile Communications. Originally, the abbreviation stood for Groupe Speciale Mobile, after the French name for one of the international groups that was responsible for planning.

Delays

But the delays have now been so many and so long that it could drag out until at least next year before the network begins to function according to original plans. Only a few operating companies have moved forward so far. It is a serious hindrance for GSM's commercial success and further delays threaten its ability to come about.

It is now obvious that all the concerned parties have underestimated the difficulties, both technical, administrative and business. Perhaps the greatest responsibility, however, falls on the various bodies that will test and approve the equipment.

Complicated tests

Among other things, the problem is harmonizing the technology, functions and services. One of the biggest hassles is clearly test procedures. ETSI, the new common European test institute for telecommunications, has a key role. It has not succeeded in getting suitable software for its test computers before the summer.

No fewer than 450 tests are needed to be able to give full approval for a mobile phone for GSM. ETSI's test stations can only test one model at a time, which takes at least one and a half months.

Bearing in mind that there will certainly be at least a couple dozen models to test, the process is bound to be delayed. The same problem also afflicts to a certain extent the systems technology and the stations.

No clear details

This has made manufacturers retreat from initiating any large volume production. They want clear details on what is needed. Otherwise, they may be forced to recall, yes, even redesign their products.

It is obvious that operators are now beginning to gripe about the

low production volumes among manufacturers, even if they are aware about the testing and approval problems. They are afraid of lack of equipment when demand takes off, which can mean less income.

But there are also a number of other problems that threaten GSM from quickly becoming the giant market optimists foresaw. The EC commission, the EC's executive body, estimates that the GSM network in the year 2000 will have more than 18 million subscribers, a market for manufacturers worth 150 billion kronor.

The network is digital, in contrast to the still dominant analog technology in the existing national networks. Customers will have to wait well into 1992 before having access to mass production of digital mobile phones for GSM which are just as small and convenient as today's analog.

Costlier equipment

Added to this, costs for equipment for GSM will be clearly much higher than existing ones. Some say 25 percent higher in a few years, even if prices change from country to country. In the Nordic countries, where mobile technology and markets are already well established, they expect prices to fall quite rapidly over the next two years.

It is also clear that subscription prices and services will not be particularly public taxing in the beginning. Many operators have still not determined their tariffs, but they will initially be so high that it will mostly be a question of a relatively exclusive "professional" market for companies.

Slim services

The services the GSM network offers in its first phase are not especially impressive. Phase 1 standards include to a large degree ordinary "telephoning." In Phase 2 there will be alphanumeric message services, certain fax services and some complicated things like teleconferencing. According to plans, the network will eventually be expanded with more than 100 different service possibilities.

A particular problem that was only recently resolved is how billing for calls across borders will be done. The mobile phone's "home country" should take care of the bill. Operators must at all times inform the EC Commission on the size of charges.

With the initial delays and high costs it is all the more unbelievable that GSM will be the huge mass market for nearly 20 million subscribers by the end of the century, as the EC Commission expects, critics say. But mobile telephony has steadily defied all forecasters. That's why it's better not to be too certain.

One year to DECT



Carphone - dangerous for decisionmakers?

British researchers have concluded that drivers who speak on car phones make worst business decisions and react slowly to surrounding traffic.

Many businessmen look upon their car as a rolling office. The latest technology means that business transactions are conducted over the car phone, faxes are sent and received from the car and other data communications can also be achieved during driving.

The idea behind all of this is that the driver would be more efficient in his work. But researchers in Britain have discovered that it is not always so rewarding to use all the radio technology in the car. The risk is that the business call made from the car is not all that successful, that the driver quite simply makes bad decisions under the influence of all the traffic. Another and more obvious side of the issue is of course that traffic safety is also jeopardized. The researchers have shown that many people cannot in their brain deal with both information and traffic at the same time.

The stress level increases when one tries to deal with the task. More and more information escapes, both from the traffic and the ongoing call. In tests done in Britain it was shown that only one in five drivers felt he could conduct negotiations problem-free via his car phone. The rest felt a pressure on them to quickly end the call so that they could deal with the traffic.

According to the English studies, it is clearly easier to master the situation if the radio has hands-free equipment, but still it can often be dangerous trying to combine business and driving.

An important milestone on the way to DECT, the European standard for cordless telephony, was passed at the end of June. The proposal was submitted then for review to the national standardization committees. In April next year the standards can be adopted.

At the next meeting of ETSI's committee for radio equipment, TC RES, it was decided that a DECT proposal was ready to be sent for review. With a rush it is now in the mailboxes of the national standardization institutes in all the European countries. It is 12 centimeters thick, this proposal, which can serve as the base for a re-fashioning of the world's work places with the mobility and increased proximity that cordless telephony affords.

The national institutes have to discuss the proposal with ETSI members, representatives of suppliers of telecommunications equipment in the respective countries and unite on eventual comments on the proposal. At the latest, by mid-December, the institutes must submit this to ETSI.

Evaluation

A special work group within ETSI will compile and evaluate the incoming comments and by the latest, in March next year, the group will leave a working DECT proposal. At its meeting on the 16th of the same month, TC RES will decide whether the deposited proposal is acceptable.

Assuming the proposal goes through, it will be returned to the national institutes, which in April will meet for a final vote: Accept the proposal? Yes or no. If the proposal gets 71 percent of the vote, the DECT standard will be instituted.

On the other hand, if it thrown out by the technical committee or

Milestone on the way to European standard for cordless telephony is passed

in the institutes' vote, work with DECT will be set back halfway from the start again. Depending on how comprehensive descriptions should be, the standard could be delayed at best some months, and at worst some years.

"DECT has support"

At Ericsson Business Mobile Networks in Holland, EMN, which is responsible for cordless telephony in the Ericsson Group and which is closely following the matter, they are nevertheless, optimistic.

"There has been solid support for DECT in Europe since 1988. The proposal is well grounded and many parties have been involved in bringing it about," says Hans van der Hoek, marketing director. "We do not feel, therefore, that there will be many comments."

According to Hans, the greatest danger is that the process will take time. From Ericsson's standpoint,



Is this the way the DECT telephone looks?

the better it is the quicker DECT is approved, since work on developing a system based on the standard is already well begun. The work is facilitated by its own technology for cordless telephony, CT-3, which has large similarities with the proposed DECT standard.

Message in December

Does it not then seem very risky to begin development work before the standard is approved and before

one has even seen the review comments? Hans does not think so.

"The comments eventually will be of a detail nature and do not affect our work in this aspect."

They will certainly know in December. All comments will be public as soon as the review time is up. Assuming that all goes according to plan, Ericsson will be among the first to launch a DECT-based system.

DECT IN BRIEF

Technology without approval

The EC Commission has issued a directive that says that when DECT-based equipment is approved in one of the member countries it is automatically valid for all of the EC.

Ericsson Business Mobile Networks, EMN, which is responsible for cordless telephony in the Ericsson Group, hopes that even non-members will follow the directive.

Since cordless telephony is such a new technology, EMN is afraid that competence

may be lacking to get approval when the DECT system is ready.

EMN will work to see that this problem does not arise.

A place for DECT

The problem of getting frequency sharing for cordless telephony seems like to arise when DECT is instituted.

The EC Commission has gone out with a directive which says that the frequency area

for DECT must be free in all member countries in January next year. There are indications that other European nations will follow the directive.

Seminar on DECT

Ericsson Business Mobile Networks is arranging a seminar on the situation for DECT in Amsterdam on September 16-17.

Division and marketing managers in Business Communications are invited.

To those who want to know more about Cable and Network

The World of Cable and Network



THE WORLD OF CABLE AND NETWORK is the title of a yearbook from Business Area Cable and Network (BN). It is now ready and comes directly from the presses. The 32-page publication describes in detail the entire globe-circling markets and the activities that go on in that expansive area. Cable and Network, with some 40 companies in 20 markets, is the third-largest business area in Ericsson's operations.

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Ericsson invests in recreation

Cheerfulness is a factor that is becoming more and more important in the competition for manpower. Ericsson is rather unique when it comes to offering its employees various activities both on and off the job. There are activities for all tastes. In Stockholm Southwest health facilities, sports and recreation clubs are now being organized.

"We want to be better than other companies and strive for practical cooperation between these activities so that we are moving in the same direction," says Lars Wiklund, personnel director at Ericsson Telecom (ETX).

"Employees should use flexi time and our recreation facilities better, preferably during the daytime. As it is now, people are uncertain whether they can play tennis in the day and many go around with guilty consciences although they work the time," says Lars.

The planned merging of fitness, sport and recreation in Stockholm Southwest does not imply any organizational changes right now. On the contrary, we have worked out a policy for future health care.

"In the future, the idea is that we will work more closely together so that the offer is more thorough. Partly, we will work as we do now, and partly we will try to find new common activities. In the sport activities we are about to invest less in contests and more in scope" says Lasse Brosell, sports consultant at ETX.

Unique fitness care

Ericsson's fitness care in Stockholm is unique. Together with Saab-Scania in Linköping, which last year was named "best fitness care company in Sweden," we are pioneers in the field with 11 years of experience.

Fitness care functions as a resource in the company's medical department and offers everything, from health tests, weight-watcher groups, tai-chi, back calisthenics, as well as individual rehabilitation programs. Ever more important for fitness care is the chance to ward off cardiac and vascular illness and improve one's living approach so that in future he will continue to be healthy.

"I believe proximity plays its role. People feel it is good that we know the workplace and the milieu," says Britta Berggren, one of Ericsson Telecom's two fitness

To retain employees companies must offer more than just jobs



Fitness care is a part of the recreation investments at Ericsson in Stockholm. Britta Berggren, fitness consultant, gives Gunilla Igelborn Bogren help with back exercises.

consultants. "Physical and cultural activities are a good way to increase togetherness in groups, increase cheerfulness and get people to stay on their jobs."

Clubs for all

For Stockholmers, there a lot of fitness activities to choose from. Clubs, many of them with 40 years existence, are organized by recreation consultants. The latest club to be formed is a pensioners organization which was established this year. It applies to those who feel alone after a long working life. The scope of activities is wide. There is, among other things, art, theater, amateur



Billiards is an international sport with many practitioners in Ericsson. Mike Clesluk, ETX, concentrates before his next play. Scott Nolan, a temporary visitor from Ericsson Ltd. in Brighton, looks on.

radio, astronomy, billiards, flying, sailing, mountain climbing and pistol shooting to choose from.

The largest of the recreation clubs is the computer club, with about 1,300 members. Each club is ideal. The board seeks help from the company which puts aside a certain amount of money per employee every year. In addition, some clubs charge a fee for membership and, sometimes, for material. For a token price, you can have a fantastic time.

"It is an advantage that the activities are carried out in house. You avoid travel and can go straight to work afterwards. It is convenient to choose to join us in one of our clubs," says Leif Bölke,



Erik Hyllander is one of the fireballs in LM Ericsson's amateur radio club. The club has more than 100 members.

who since 1986 has been working as a recreation consultant full-time. "I would like to point out that Ericsson has one of Sweden's largest and best recreational facilities. Sometimes a little amateurish and folksy, but I think the charm is that employees themselves are active. One has the chance to pursue his hobby among workmates and one can cement contacts between companies in the group."

The sports club is the largest. The most popular activities are calisthenics, golf, inside bandy, running and hiking. But there are also organized championships in workout, tennis and

squash around the country and in the Nordic capitals.

The clubs are organized under the Ericsson company's sport federation. The company contributes money for activities and the clubs also take a smaller annual membership fee.

"If you don't like sports, you might find us somewhat competition oriented. But that is a misconception. Much of what we do strengthens not only the physical well-being but also the togetherness. Exercise make people less sick and makes it easier to recover after an illness. One feels better," says Lasse Brosell.

"We know that there are many who do not exercise at all in their free time. I feel one should see these activities as a chance to do something together with colleagues linked to the job."

If you do not find something in the sports club, you can try something in the recreation clubs. The important thing is to do something. It is so important to function both on and off the job.

"I know many who stay with Ericsson because of the activities on the side. I have a lot of proof of this," Lasse concludes.

**Text: Charlotta Westling
Photo: Maria Petersson**

Healthy in spare time

Of 16,000 employees in Stockholm 7,000 are in 25 recreation clubs where some are more than 40 years old. Some 6,200 are members in 10 sports clubs. The oldest club is at the main plant, 53 years old. Each year, more than 600 use fitness resources in the company's health department. Fitness care has been around for 11 years. It is not only Stockholmers who have a lot of activities to choose from. About the same offers but on a smaller scale are offered throughout the country.

CLIPS

25 years ago these items ran in the Swedish *Kontakten*:



Mrs. Robert Madden in Tiffin, Iowa, is one of the subscribers who has already obtained with a DIALOG set with push buttons.

Push button telephones on the way

"Ever since automatic telephone traffic was introduced at the beginning of the '20s, finger dialing has been used as the impulse trigger for automatic connection of calls. Today, practically most sets in universal use are equipped with finger dialing.

With the telephone density which at present is foreseen with the expansion of tele networks, finger dials can hardly be seen as the most modern. The time when modern exchange equipment calls for receiving and transmitting of number impulses is significantly shorter today than when with the help of dialing exchanges provided information about the desired subscriber's number.

The impulse method that was chosen to meet this demand is a push button. Already in 1954 Swedish Televerket in collaboration with L.M. Ericsson introduced the first push button set, which in the first place came into use in the field tests that on a lesser scale was partly conducted for system studies on exchanges and



The DIALOG set is equipped with push buttons

partly for a study on subscriber reaction before introducing the new impulse triggers.

Push button sets of the DIALOG type foreseen for the latter named impulse system has very recently been put into operation in Copenhagen with a field test covering 1,000 subscribers. A corresponding field test will also be conducted in Stockholm in 1966.

It appears totally clear that our future telephone sets will be equipped with push buttons instead of finger dials. The question of what impulse triggers – tonal key sending or DC key sending – will finally be used is still an open one."

(From *Kontakten* No 2/1966.)

Postcard from Russia

Events in the Soviet Union have dominated news broadcasts in recent days. Ericsson is certainly active on the Soviet market, but the company's interest there is not as far-reaching as some of its competitors. On the other hand, 90 years ago Russia was a market that clearly attracted Lars Magnus Ericsson.



FABRIQUE DE TELEPHONES DE L.M. ERICSSON & CO. A ST. PETERSBOURG.

Did you know that L.M. Ericsson already back in 1900 sold 90 percent of its production as exports. The company had 1,000 employees.

Most of them worked at head office in Stockholm but there were also operations abroad. In 1889 the company began to build its first factory abroad – in St. Petersburg.

They came close to moving the entire operations to Russia as a result of opposition between LME and its then largest customer, Stockholm's Allmänna Telefonaktiebolag, SAT.

In the latter half of the 1800s SAT had been LME's indisputably largest customer, but then in 1891 it began to manufacture its own sets. As a result then in 1900, SAT's orders for LME just about stopped. Lars Magnus Ericsson turned his gaze eastwards, toward the virgin Russian telephone market.

Operations in Sweden were rescued when SAT came to the same conclusion. Its director, H.T. Cedergren won the rights for his company to set up a telephone network in Moscow and Warsaw. In this situation,

he also realized that his own factories did not have the capacity to handle manufacture of telephone sets. SAT and LME therefore were reconciled in 1901, so much so that SAT sold its telephone factory to LME in exchange for a larger share deal.

When the opposition with Cedergren and SAT was resolved, Lars Magnus Ericsson relinquished the post of president and chairman of the board in LM Ericsson. He spent the last 25 years of his life on his estates in Alby and Hågelby in Botkyrka. Ericsson's founder, one of the largest "entre-

preneurs" in Sweden's early industrial history, died in 1926.

The First World War brought an upturn for LM Ericsson's factory in St. Petersburg which was then managed by a special Russian company. The number of employees rose to 3,000, which meant that the Russian factory at this time had twice as many personnel as the head office in Stockholm. The Russian company answered for almost half of the parent company's total invoicing during the period 1905-1914. A large part of the sales were exports from Stockholm, since the factory

in St. Petersburg was not big enough to handle demands.

In 1917 came the Russian revolution. As a result, LME's Russian subsidiary and another company in which LM Ericsson was part owner, Telefonbyggnads AB in Moscow, were nationalized in 1918. The Swedish parent did not receive a single krona in compensation for its seized assets, which were valued at 20 million kronor – a giant sum at that time. Attempts to negotiate with the Russian authorities did not lead to any results.

ALPHABET SOUP

Text and drawings by Ulf Jansson



YEP O'HOO!

Now it is definitely out to be a Yuppie. The in thing instead is to be a Yeppie (a member of the Young Ericsson People club).

It's hard to get in since you must be an Ericsson employee, have a foreign citizenship and be in Stockholm for a period of contract or training. And above all, you must be thirty or under.

Ericsson Guest Service takes care of the Yeppie arrangements, and the idea is that it should be fun to discover and be in Stockholm together with other young people from Ericsson.

This summer's arrangement was a full musical evening in the archipelago's last steamboat, Blidösund. Guest Services was lucky with the weather. It was 25 degrees in the shade when the boat pulled out from Skeppsbron at 7 in the evening. The sun was still up and the cool breeze on the deck was welcoming.

Some thirty Ericsson young people, of different nationalities, went out to the archipelago. Thailand, Italy, Germany, Holland, England and the U.S. were some of the countries represented by the young engineers, lab testers, systems analysts and product managers.

Below deck, a heated Mexican band with the name of Hot Salsa played, which could hardly be accused of cooling off the boat's passengers. Sooner getting them swinging and jiving.



Text: Pernilla Åström
Photo: Maria Petersson

It's sunny, it's hot. It's noisy, it's cramped. It's the lambada and summer in the Stockholm archipelago aboard the music boat Blidösund.



Nigel and Katja from England have been in Sweden two weeks and will stay for two years. "A lovely trip," they say smiling.

Fall is a good time for change

You who are used to reading the paper from front to back may have noticed that we have rearranged the contents of the internal publications a bit. We have tried to give them a more fixed structure so that it would be easier to find your way around. At the same time we have tried to distribute the material a little better so as to have a better flow between various articles and news items.

First in the paper, you will find the "news pad," where we present news items and news articles from Ericsson around the world. Business news is played on one page, other news on another page. The news pad is rounded off with an economic page, where, among

STOP
PRESS
BY LARS-
GÖRAN HEDIN



other things, you will find the stock market and Ericsson share wrapup.

After the news comes the feature pages with various themes before we round off the paper with a couple of pages with lighter stuff. A lot of new things are on the way regarding the contents of the papers.

The new structure of the paper is a first step in a direction that I hope would bring the in-house publications a little closer to the reader. This is the main goal in mind with the changes we are planning—to get you to like this paper. So that you will read it thoroughly and so be better informed about Ericsson and feel more of a participator in what the company is doing.

The next step toward a better paper planned for the September issue. Then we will introduce an internal "openings forum" where new jobs in Ericsson will be announced, often before they appear in the daily press. In this section we will also present editorial news related to personnel. I believe this would be a really readable part of the paper.

In October, it's time for stage three. No less readable than the ads job openings are small private announcements. Therefore, we offer Ericsson employees the chance to announce free under the headings of "To buy," "For sale," "For rent," "Want ads," etc. More information will appear in the next issue.

With the November issue, we reckon that the attempts already begun with external ads will have developed to mainly cover announcements that directly relate to you as a private individual. They can, for example, be ads with interesting special offers for Ericsson employees.

In good time before the Christmas holidays, we hope to have the last step in the improvement process completed. Exactly what shape it would take I do not want to say yet—that should be a Christmas present for readers. Let's hear from you! Give us in the editorial department your views about the changes we have made and do come forward with suggestions for other changes. I hope you will have a pleasant fall in the company of your in-house paper!