contact

ERICSSON PUBLICATION FOR EMPLOYEES WORLDWIDE

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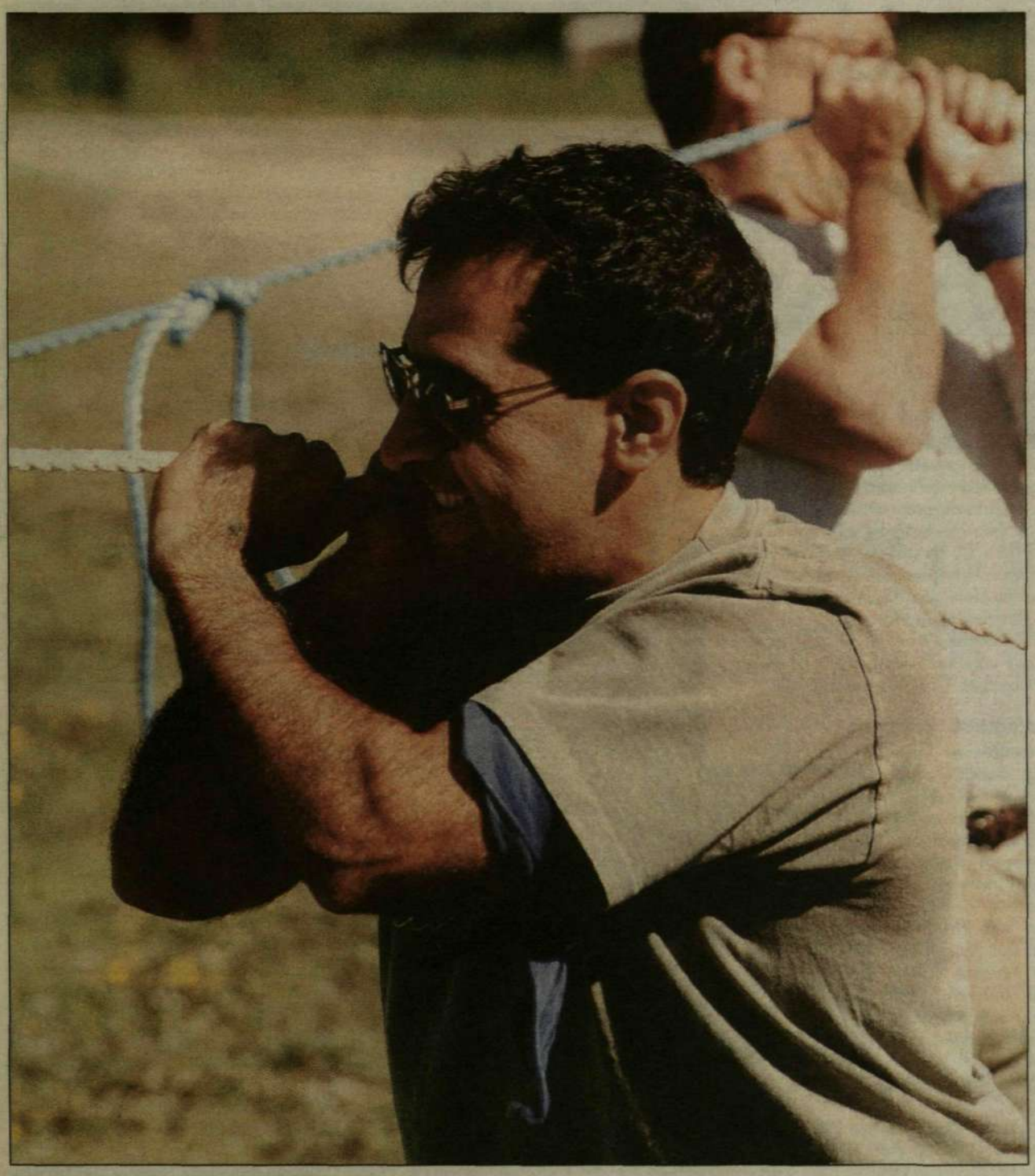


THE ART OF PULLING IN THE SAME DIRECTION. **Various team-building exercises are an important component of Ericsson's training programs for top management.** Photo: PATRIK LINDÉN

A good manager works well with others

Ericsson Management Institute plays a very important role in the company. Its key functions include recruitment, training and competence development of Ericsson's present and future top managers.

PAGES 6–7

Be part-owner of Ericsson!

Ericsson employees throughout the world are being given the opportunity to be part-owners of the corporation. In each country where it is legally permissible, employees have the opportunity to sign up for up to SEK 75.000 in convertible debentures.

Page 9

Brilliant first six months

Ericsson continues to report favorable financial development. The interim report published on June 24 reports earnings of more than SEK 6 billion for the period January-June 1997. Furthermore, order bookings continued to increase for the twenty-third consecutive quarter.

Page 3

Status in Vietnam

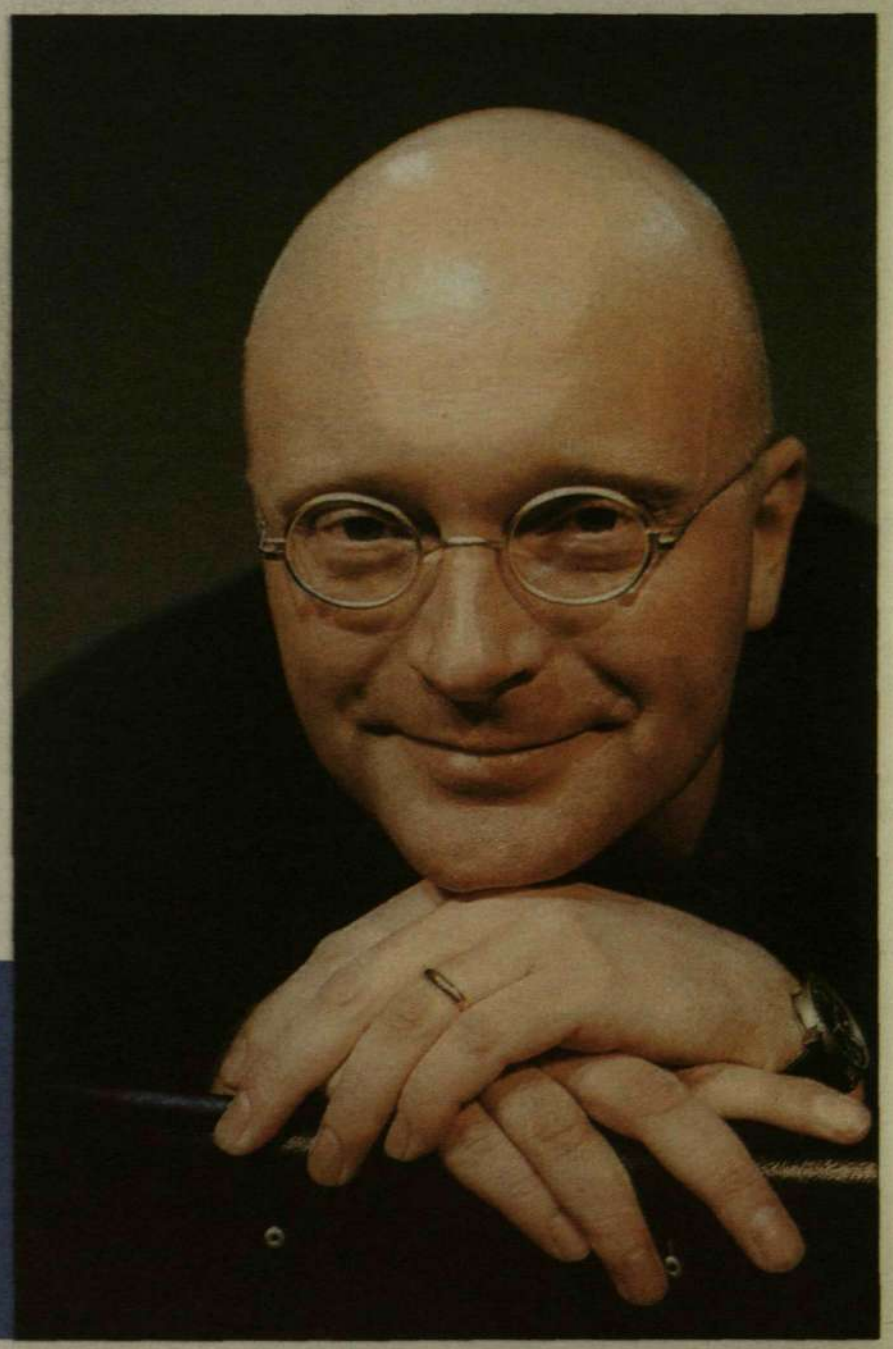
Ericsson has more than half of the market share for mobile telephones in Vietnam. Owning an Ericsson is truly a status symbol. In this country, which is experiencing unbelievable economic growth, many can now afford such a luxury. Ericsson is also a successful supplier of GSM systems and AXE stations for international traffic.

Pages 16–17

Theme Supplement: With a watchful eye on the world around us

"We live in a crazy world," he says in a broad southern Swedish dialect. Jonas Ridderstråle is a different, extremely popular lecturer. An economist from the Stockholm School of Economics, one of his specialities is describing the changes companies will have to face in the future. His message is worth thinking about, particularly for those of us working in businesses currently characterized by strong changes and discussions about future strategies.

Be innovative in everything!



"Since we live in a crazy world, we have to make the most of all the chances and differences that are generated in this new world of opportunities!" says Jonas Ridderstråle.

Photo: URBAN ORZOLE

"It's a mad world," reiterates Jonas Ridderstråle showing a picture of Jesus on the crucifix. "Many crazy things have been done in the name of religion. Do you remember the Reverend Jim Jones, who led his sect into ritualized collective suicide in Jonestown, America, in 1978?

"I bet you're asking yourselves, what has this got to do with Ericsson? Well, I could talk about the fact that loads of organizations are currently in the process of committing collective suicide, but I don't suppose this would be so elevating. So I have decided to focus on something else."

Everything is moving faster

"In 1978, it took about 18 months before a film was made about Jonestown. But it only took Hollywood about a month to produce the first film about Waco. In fact this is not completely true. Just two days after the macabre event in Waco, film crews were on location recording soap operas.

"This is a trend we must take seriously. Everything moves much faster today than ever before. This is true of all activities – and perhaps particularly of financial activity.

"Everything we are used to has changed. If you can't keep up, you're out in the cold. We are currently experiencing a revolution and living in an era that will fundamentally change the basic conditions for our way of life and how we will conduct business and operate various types of organizations. What is emerging today is what I call the company of the future."

• Where will the future companies' core businesses be found?

"Somewhere else. Perhaps in the Far East, or in one of the former eastern bloc countries, or in parts of the U.S. They will also look different.

"We will work in a completely different way. We will mix business with pleasure and think in completely different terms. Being a bit of a "nurd" may not be wrong at all, as long as this results in creative solutions and ideas," Jonas explains. "In fact, we are entering the century of the 'nurd'."

He shows us a picture of Microsoft's founder, Bill Gates.

"We all know him. One of the world's most successful and wealthy men ever. Bill was a real 'nurd' when he was young. He wasn't particularly bright at school. He was always turned down at school dances. Now he's exacting his revenge! He found a different niche and formulated a creative business concept. That's what it's all about. We must all bring forth the entrepreneurial spirit within us. Dare to move outside established borders and try new methods!

"Economics is about making money. That's why we have to build temporary monopolies – that is, market niches."

Strengthen your niche

According to Jonas, each company must strengthen its market niche by continuously enhancing the expertise of employees and allowing people's creativity to flow, so that both the products and the employees become unique and different. But the products must be things people want and can use.

Jonas draws a parallel with Metcalfe's law?.

"The whole idea is that the utility derived from being part of an electronic network increases exponentially with the number of users," says Jonas. "Or to phrase it more simply, the product becomes more than twice as enjoyable if there are two users rather than one – this results in explosive growth.

"This is what is happening today with the Internet and mobile telecommunications, which affects companies like Ericsson in particular. It's a matter of focusing on the right products with rapid growth potential, and having an appropriate vision of the future."

• What will be the specific characteristics of the companies of the future?

"They will be global and have a greater number of creative employees. They will be smaller, have staying power, focus on niches and invest in their core expertise."

• How will this future be attained?

"By being innovative in everything you do, having non-hierarchical companies, working in networks both within a company and externally, investing in and capitalizing on the benefits of IT, assessing the company's objectives more regularly and at more levels, employing new types of people, sharing values and profits and finally by manufacturing 'esthetic' products. The companies of the future will also be more customer-oriented than ever before.

"It may well be that an operator of tomorrow will have its own floor in an Ericsson building. Or Ericsson in a operators´ building.

"Are you prepared to take risks and break existing patterns?" Jonas asks suddenly.

He rushes out among the audience. Throws himself to the floor and crawls around on his hands and knees.

Many members of the audience were probably thinking that he had flipped out completely after all, or maybe not...

"If I had walked into this place in the normal way, like the rest of you, I wouldn't have found this hundred krona bill," says Jonas, smugly waving the bill in his hand.

"If you don't take chances and try new moves, you won't have anything to gain.

"Since we live in a crazy world, we have to make the most of all the chances and differences that are generated in this new world of opportunities.

"It's a matter of finding products that are faster, more attractive and quieter, for example. They have to be unique and different."

Larger perspective

"If you want to make products that are a little different, you must also trust in people who are a little different and think in different terms. We normally call such people entrepreneurs. The main task of companies of the future is to let these entrepreneurs loose.

"If we live in a crazy world, the only way to survive is to be a little more crazy ourselves!" says Jonas in conclusion.

JOSEPHINE EDWALL-BJÖRKLUND

Another quarter with higher order bookings

"The increase in our order bookings for the 23rd consecutive quarter demonstrates that the positive trend for Ericsson is continuing," writes Lars Ramqvist in his comments to the six-month interim report.

Lars Ramqvist writes that the continuing positive growth for Ericsson represents confirmation by the market that our product development is competitive and that we are able to meet customers´ needs.

"As a result of the strong growth in income, we were able to handle the sharp increase of nearly SEK 21 billion in sales in the first half of 1997 with a balanced cash flow.

"The future of mobile telephony is now being determined by the global standardization work being conducted by public authorities and the industry. Ericsson, together with other suppliers, is supporting a new technology – Wideband Code Division Multiple Access (W-CDMA) – for third-generation mobile telephony systems. This new technology makes it possible to use a mobile telephone for Internet and advanced multimedia services, including video.

"The Mobile Telephones and Terminals business area is developing very strongly. Having doubled our net sales, we estimate that our shares of the market continued to increase.

"In the Infocom Systems Business Area, the enhancement of its core product, the well-known AXE exchange, has proceeded very rapidly. The most important factor behind this rapid development work is the explosion of the Internet and other Internet Protocol (IP) services. AXE is now being developed into an open architecture to also handle multimedia services.

"Ericsson is continuing to strengthen its dominant position in the field of intelligent networks. Products and systems in the access area also represent an important growth area.

"In the transport network area, Ericsson introduced during the first half of the year its new WDM (Wavelength Division Multiplexing) fiber optical system for use in transport networks. This system permits a manifold increase in the transport capacity of existing fiber optical networks.

"Income of Infocom Systems is still unsatisfactory. The rationalization program to deal with the severe pressure on prices in the business area's major product segments is continuing. Meantime, with its new product-and-system programs, the business area is achieving the capacity to make the rapid changes that the market is imposing.

"Ericsson's employees have shown great ability to meet the steadily increasing demands for ever-faster changes in the dynamic market for telecommunications and information technology. Through their involvement, development of personal skills, continuous learning and focus on our strategic objectives, our employees' efforts in all areas are the key to the success that Ericsson is reporting," concludes Lars Ramqvist.

The Mobile Phones and Terminals business area more than doubled its sales during the first six months. China is one of the markets in which Ericsson's sales of mobile telephones are highly favorable. Photo: PÄR LUNDBERG

Half-year profit is six billion

Ericsson's order bookings during the second quarter rose for the 23rd consecutive quarter, as shown in the interim report released on July 24. A six-month profit of SEK 6,095 million was reported – exceeding stock market expectations.

Ericsson´s order bookings in the first six months of 1997 increased by 39 percent, amounting to SEK 87,764 m., compared with SEK 63,345 m. in the corresponding 1996 period. Orders booked by comparable units (including the consolidation of Ericsson Telecomunicacoes in Brazil) increased by 34 percent.

Net sales rose by 44 percent compared with the first six months of 1996 and amounted to SEK 72,210 m. (50,030). Net sales of comparable units increased 41 percent.

Capital gains

Income before taxes amounted to SEK 6,095 m., an increase of SEK 1,871 m., or 44 percent, compared with income in the year-earlier period (4,224). Excluding net capital gains, income before taxes was 60 percent higher. The consolidation of Ericsson Telecomunicacoes did not affect pre-tax income. As a result of the weaker Swedish krona, income in the 1997 period includes approximately SEK 500 m. more in foreign exchange gains than in the first half of 1996.

Income per share, after current taxes for the period and deferred taxes, and after full conversion, increased 38 percent, to SEK 4,23 (3.06).

The United States is Ericsson´s largest market, followed by China, Great Britain, Sweden, Italy and Spain. All market regions reported good growth.

As of June 30, 1997, Ericsson had 96,250 employees, an increase of 2,571 since December 1996.

Ericsson´s cash flow before financial operations was essentially neutral. Commitments related to customer financing are increasing, while refinancing agreements are being arranged in most cases.

The equity/assets ratio at the close of the period was 37.7 percent #9.1 at Dec. 31, 1996).

Ericsson´s investments in property, plant and equipment amounted to SEK 2,891 m. (3,356), of which SEK 1,551 m. (1,788) pertained to capital expenditures in Sweden.

BUSINESS AREAS

Mobile Systems continues to show strong growth. Orders booked by comparable units increased by 18 percent and net sales were 25 percent higher.

Development of the "third-generation" mobile telephone system based on W-CDMA (Wideband Code Division Multiple Access) technology for multimedia services is being conducted with a view to achieving common standards, initially within Europe and Asia.

Orders booked by comparable units of **Infocom Systems** increased 15 percent, and net sales were 28 percent higher. Earnings of the business area as a whole are still unsatisfactory, due to price pressure in major product areas, the rationalization of operations that is now under way, and the continuing substantial technical-development programs.

Mobile Telephones and Terminals reported a very sharp increase in net sales – in excess of 100 percent. A number of additional products were introduced during the period.

Other operations (power, components, cable and defense electronics) developed well; orders booked increased 42 percent and net sales rose 29 percent.

Stockholm, July 24, 1997

LARS RAMQVIST

Six months ended june 30 1997

- Orders booked, net sales and income are continuing to increase substantially.
- Very strong development in mobile phones.

Order boookings	87 764 MSEK	+ 39 procent
Net sales	72 210 MSEK	+ 44 procent
Pre-tax income	6 095 MSEK	+ 44 procent
Income per share	4,23 SEK	+ 38 procent

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industry news

Exclusive agreement between Lucent and Ameritech

■ U.S. mobile telephone operator Ameritech has signed an exclusive five-year delivery agreement with Lucent Technologies. The agreement names Lucent as the sole supplier of infrastructure for Ameritech's mobile network. Among other equipment, Lucent will supply exchanges and base stations for Ameritech's "ClearPath" networks in Chicago, Detroit, Cleveland and Indianapolis. In the longer term, ClearPath will also be introduced in other areas where Ameritech has an operating license.

Motorola upgrades mobile network in Shandong

■ Motorola is to supply equipment for the expansion of the analog TACS mobile telephony system in Shandong province, China. The contract, which is worth USD 25 million, is a follow-up to a USD 50 million contract, secured in March of this year, for the expansion of the same network. The two contracts reflect the extremely rapid growth of mobile telephony in this part of China.

Nokia secures German GSM order

■ VIAG Interkom, the fourth-largest mobile operator in Germany, has selected Nokia as its main supplier of radio base stations. An initial order, worth DEM 300 million, for equipment for the first phase of the so-called E2 network in Germany was announced at the beginning of August. Deliveries and installation will take place during the next 12 months. VIAG Interkom's network is scheduled to go into commercial operation in mid-1998.

Alcatel's sales increase

■ According to previews of Alcatel's interim report for the firs six months of 1997, sales have increased 17 percent, from FFR 74.3 billion to FFR 86.9 billion. The increase reflects a sharp growth in orders during 1996. Sales increased 12.6 percent. All market segments reported improved earnings, particularly telecoms, with a 19-percent increase. Order bookings in the telecoms area increased 18 percent.

Record quarter for Nokia

■ Nokia set new records for both profits and sales during the second quarter of 1997. Continued global expansion of digital communications systems resulted in a 46-percent increase in sales, to FIM 13,061 billion, from slightly less than FIM 9 billion for the corresponding period of 1996.

Strong growth continues in both the telecoms area, up 35 percent, and mobile telephones, up 49 percent. Profits for the second quarter increased from FIM 728 million to FIM 1,879 million.

Nokia president Jorma Ollila noted in particular the 94-percent increase in mobile telephone sales during the first six months and the increased number of orders for communications systems.

Ericsson overhauls Nokia

■ For the first time, Ericsson is now larger than Nokia in mobile telephones. During the second quarter of 1997, Ericsson's sales of mobile telephones amounted to SEK 10.8 billion, compared with SEK 10.6 billion for Nokia.

During the first six months of 1997, Ericsson's mobile telephone sales increased more than 100 percent. However, Nokia's total sales figure for mobile telephones is slightly higher, at SEK 19,527 million, compared with Ericsson's SEK 18,387 million.

Japan unit wins prize

This year's winner of Ericsson's Best Improvement competition was the business unit for mobile systems, Japanese standard. The ESSI improvement project has substantially improved the quality of software for the mobile networks supplied by Ericsson in Japan.

This year senior managers in the Ericsson Executive Team selected the winners through their votes at the final in Stockholm on June 26.

Ericsson's Best Improvement competition has become the traditional highlight of Ericsson's worldwide improvement work. When the competition was sagged this year for the fourth time, a new procedure was introduced for the final.

In a semifinal held in conjunction with a meeting on the island of Lidingö, near Stockholm, at the beginning of June, eight contestants competed for the four places in the final. Simply getting as far as this semifinal was of course a major achievement in a company which now pursues improvement projects on a large scale and at virtually all company units worldwide. The eight semifinalists were:

- Ericsson Ltd, England, ETL/Z: "Service 2000" – aimed at building a world-class service organization
- Ericsson Cellular Ltd, New Zealand: "Competence-Development Process"
- Ericsson Australia, EPA/T: "Continuous Learning 'Down Under'"
- Ericsson Telecomunicacoes, Brazil, EDB/NT: "Reduction in the Number of Faults Reported by the Customer"
- Ericsson Ltd, England, ETL/X: "Serious drive to develop software based on SDL (Specific Description Language)
- Ericsson Radio Systems, ERA/J: "ESSI Improvements"
- Ericsson Australia, EPA/F: "Resource Planning in Production, MPRII"
- Ericsson Telecomunicatie, The Netherlands: "How to Present oneself as a Supplier – No Apologies"

This year's winner of Ericsson's Best Improvement competition was the business unit for mobile systems, Japanese standard. Photo: KURT JOHANSSON

Four finalists selected

From the eight semifinalists, a jury selected the four projects that would proceed to the final. These turned out to be the Ericsson radio project, the two Australian projects and the Brazilian project. The four projects that did not make it beyond the semifinal at least had the honor of having gone so far in the competition. As usual, the jury had a difficult task choosing between the excellent candidates.

In the final, held this year in conjunction with a meeting of the Ericsson Executive Team (EET), consisting of Ericsson's senior managers from corporate management, the various business areas, corporate management functions and Major Local Companies, the four finalists were once again required to give detailed presentations on their projects. The quality of the presentations was uniformly high, and the same was naturally true of the projects that were described. Then the EET group faced the difficult task of selecting an overall winner.

The winner was the business unit for mobile systems, Japanese standard, whose entry was a project conducted within the framework of the Ericsson System Software Initiative (ESSI), a program aimed at radically improving the quality of the software produced by Ericsson. The Japan unit's improvement project was initiated after deliveries of the unit's first product – the CMS30 system, phase 3 – to Japan.

"We were bedeviled by numerous faults, which we rectified without probing deeper to find the causes," related Karin Nordin, who headed the improvement project. "This led to mistrust of the business unit's methods for testing software and to suspicions that the systems were not sufficiently robust. One of the consequences was that we were forced on three occasions to apologize to the Japanese communications ministry. At stake was a market worth SEK 5 billion per year!"

A long series of measures and activities was set in motion. The project succeeded in reducing the number of faults to one third of the original number, and the amount of down-time on delivered systems was reduced by 50 percent.

Contest continues

Surveys of customer attitudes toward Ericsson revealed a substantial improvement, and in financial terms Ericsson immediately achieved savings of SEK 1.1 million. The indirect gains were many times greater still, since Ericsson was able to retain its position in the Japanese market. Now customers no longer harbor any doubts about the quality of the software Ericsson delivers to Japan!

A total of 43 improvement projects participated in this year's competition. Now the contest continues in the lead-up to next year's final. It is only fitting that continuous improvements should form the basis for an annual competitive event at Ericsson.

Märet Ström, the new manager of the Corporate Operational Development support unit, and her colleagues can relax, now that this year's final is concluded, and build up their strength prior to the 1998 edition of the competition.

LARS-GÖRAN HEDIN

More information about the competition and all the semifinalists and finalists can be found on the Ericsson Intranet at http://lmeq.lme.ericsson.se

news briefs

Japan chooses Ericsson's wireless broadband technology

■ The Japanese telecommunications company Japan Telecom has chosen Ericsson to develop an experimental system to transmit multimedia services via wireless broadband technology. The system will be based on what is known as wideband CDMA (Code Divided Multiple Access). In an initial phase, the system is expected to be able to handle up to 384 kbit/s. The bandwidth will subsequently be increased to 2 Mbit/s.

D-AMPS deal in U.S. worth more than SEK 1 billion

■ The U.S. operator Bell South has signed a letter of intent with Ericsson to purchase D-AMPS equipment worth SEK 1,550 million (USD 200 million) for mobile telephone networks in the 1900 MHz band (PCS).

The equipment will be installed in BellSouth's networks in Alabama, Florida, Georgia, Louisiana and Mississippi. The order will include six exchanges and more than 500 radio base stations.

Two Brazilian orders for mobile systems top SEK 1 billion

■ During the summer, Ericsson signed two orders worth more than SEK 1 billion each for mobile systems in Brazil. One is an expansion order for a U.S.-standard (D-AMPS) digital system, and the other is for an analog mobile network (AMPS) for the Brazilian state of Parana. The order from the Telepar company of Parana is Ericsson's largest order to date in Brazil, worth SEK 1.3 billion (USD 165 million).

Ericsson's other billion-crown order in Brazil is for the expansion of Companiha Riograndense de Telecomunicacoes' U.S.-standard (D-AMPS) digital network. The order is worth SEK 1.1 billion (USD 147 million).

Three GSM networks for Taiwan

■ During the summer, Ericsson sold three GSM networks – a nationwide GSM-1800 network and two regional GSM-1900 networks – in the recently deregulated Taiwanese telecoms market.

The operating company Far EasTone ordered both a nationwide GSM-1800 network and a regional GSM-1900 network to cover the northern part of Taiwan.

The other regional network was ordered by the TransAsia operating company. With these new orders, Ericsson has now secured almost half of the mobile market in Taiwan.

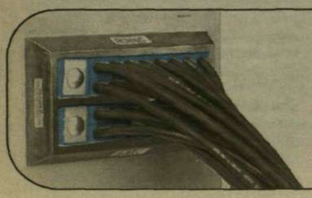
GSM breakthrough in South America

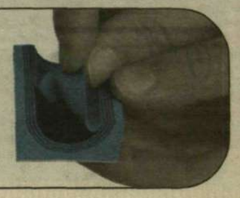
■ During the summer, Ericsson sold a GSM-1900 network to the Chilean operator Entel. The order is worth about SEK 850 million (USD 110 million). This is the first major GSM order for South America. The network will go into operation during the latter part of 1997.

AXE for Moscow

■ During the summer, Ericsson signed an agreement with the Russian operator AO MGST. The contract – worth SEK 508 million – covers delivery of AXE equipment and services during 1997 and 1998. AO MGST, the public operator for Moscow's city network, is the largest operator of fixed telecommunications networks in Russia.

"As early as the end of the 19th century, we were involved in establishing the telephone network in Moscow," notes Gunnar Forsgren, who is responsible for European marketing in the Public Networks area. "Now we are back to support future developments. The contract makes Ericsson one of the leading telecom suppliers in Moscow."





Thirteen people in tracksuits and bright sweaters are standing on a dock talking, in an idyllic setting on Lake Mälaren, north of Stockholm. There is bright sunshine, the Lake is almost becalmed and there is hardly a cloud in the sky. A plastic bucket is quietly floating on the water, with a bag of candies inside. This is not a vacation scene at a camping site – it is one phase in the Ericsson Management Program.

Contacts forged in the management smithy

The assignment involves joint problem solving. As far as the thirteen people on the dock are concerned, the bucket contains a vital medicine which must be taken within 45 minutes, not just a packet of candies. And the water is a river in the rain forest, not an idyllic bay on a Swedish lake. The bucket has to be rescued without touching the water, using the equipment provided. Active cooperation between members of the group is required.

Team spirit

This operation involves building up team spirit. The thirteen participants are all managers who are accustomed to ensuring that their ideas are put into practice. But there is not much time, plenty of ideas and people with visions, who are gesticulating with a broad sweep of their hands. But there is only time to try one scheme, and everyone must help by working together.

The group has already discussed cooperation and leadership in theory, earlier in the morning. Once the bucket of candies has been rescued, there will be a follow-up session, providing lessons which can be applied in everyday job assignments.

This is only one of the training sessions in a three-week management training program arranged by the Ericsson Management Institute, which is responsible for ensuring that the Group's 3,000 top managers receive the personal development they need to be good at their jobs.

One of the phases in Ericsson's Management Program is building up team spirit and practical cooperation. Participants must solve an assignment with the equipment provided, within a given time limit. This puts leadership and group-work theories to the test. A group containing 13 managers means a battle of wills.

Portrait of an Ericsson manager

The Group policy manual defines the ideal Ericsson manager. Here is a brief extract:

"THE ERICSSON MANAGER contributes to Ericsson's progress by performing excellent managerial work, acting with integrity and being firm and consistent. The Ericsson Manager demonstrates Ericsson's shared values, professionalism, respect and perseverance and implements the Ericsson Corporate Policies. The Ericsson manager is a visible and accessible leader and communicates effectively with customers and employees, and has an international attitude and respect for cultural differences."

It's hardly surprising if you fail to recognize all these qualities in your own boss.

Personal development

The Ericsson Management Program (EMP) is probably the Institute's most well-known course, but it also produces other programs for various categories of managers with different requirements.

"This is more a matter of personal development than teaching specific skills," Knut Johansen says, as head of the Institute.

"What is needed is general management training, and since we are part of Ericsson we can also tackle specific Ericsson questions and help to establish useful networks within the Group for people who participate in our programs," Knut explains.

Knut Johansen is careful to point out that the Institute conducts programs, not courses. There is no one-way communication. In each program, participants are expected to make an active personal contribution.

Understanding Ericsson

Participants often have several years experience at Ericsson, but in very narrow area. Participation in a program broadens views, and one of the results is achieving a better understanding of what Ericsson's other divisions and units do. In addition, participants have personal contacts with other managers in all sectors of the Ericsson world.

The Ericsson Management Institute is a small organization with only ten employees, and programs are developed on a continuous basis. Programs are conducted in key Ericsson markets, mostly outside Sweden.

"We call in the expertise we need and sign up lecturers on the world market," Knut Johansen says.

The programs are continuously updated to reflect the current focus.

"At the moment, out program planning is dominated by work on Ericsson 2005 and its subtarget (Wanted Position 2000)," Hans Löhr, one of the program directors, says.

It is not possible to apply for place on a program. Participants must be nominated by their bosses. Nomination is part of the annual management planning process conducted by all subsidiaries.

Both Knut Johansen and Hans Löhr make it clear that participation in one of the Institute's programs does not guarantee promotion. It is perfectly possible to be a senior executive without participating in all the programs. Similarly admission to a program does not ensure smooth progress up the management ladder.

Ericsson Management Institute is a small an flexible unit with roughly ten employees. Knut Johansen (above) is head of the Institute and Hans Löhr is one of the program directors

Knut and Hans explain that "People in certain positions have to get the training they need. But there is certainly a correlation, People are often nominated to programs prior to a new managerial appointment."

Hans Löhr points out that programs are not just a matter of cramming in training exercises, group assignments and lectures.

"Reflection is an important dimension in the learning process in our programs. People who are nominated often have a heavy workload in their regular jobs and rarely get time to sit down and think," Hans says. "In our programs, we want to ensure that reflection is an important part of a continuous learning process."

It might be thought that management training is not closely linked to Ericsson's core operations, and that many other institutions offer this type of service.

"It's true that there are a great many management training programs," Knut Johansen says. "But what we offer is unique. We have been directly assigned by Group management to give Ericsson's top managers the training they need. We are able to build cross-cultural networks with people from all over the world, thus contributing to the establishment of a common Ericsson culture. We spend a lot of time looking at what other people do and we are continuously evaluating our work We know that what we do is good. But we have to reexamine and improve what we do on a continuous basis. The participants in our programs are very demanding. If anyone thinks they are wasting their time, they'll let us know."

PATRIK LINDÉN

Footnote: If you want to contact the Ericsson Management Institute or read more about the unit's activities, call up the http://www.lme.ericsson.se/LMEM/ home page.

Establishing contacts – building up a network at Ericsson – is one of the positive aspects of taking part in management programs arranged by the Ericsson Management Institute. The programs focus on personal development rather than on specific skills, giving participants time for reflection when released from their daily assignments. Photo: PATRIK LINDÉN

■ In 1996, the Ericsson Management Institute conducted its six different programs on 26 occasions.

The programs were located in different countries, including China, the U.S., Japan, Sweden, the U.K., Mexico and Italy. Forty participants also took part in the five external programs arranged by the Ericsson Management Institute.

SCI/Solectron deal clinched

Ericsson's contract with the world's two largest electronics manufacturers – SCI and Solectron – was signed on July 3. This means that the global outsourcing strategy announced by the Infocom Systems business area in late March can now begin. Major internal readjustments await, but even external companies with long-standing relations with Ericsson are now facing an entirely new situation.

Ericsson's new partners. From left: Conny Evborn from Segerström & Svensson; Solectron's and SCI's purchasing managers Steve Ng and Marc Tan; Hans Ahlinder, manager of Infocom Systems' global outsourcing strategy; Ronny Nilsson, vice president of Flextronics Europe; and Jan Löfberg from Ericsson Cables. These five major suppliers play a very important role in Ericsson's new purchasing strategy. They will provide the Infocom Systems business area with products that are ready for final assembly and testing.

Photo: PETER NORDAHL

Several major international companies annually supply Ericsson with components for the production of circuit boards for AXE stations and access products. SCI's and Solectron's new agreement with Ericsson, whereby they will gradually assume a large part of Ericsson's world-wide circuit board production, will have a major effect on Ericsson's relations with the component suppliers.

For suppliers of standard components, direct cooperation with Ericsson will cease almost entirely. New business relations and routines will have to be established to Ericsson's new circuit-board partners – SCI Systems, Solectron and Flextronics – as well as to Segerström & Svensson, a long-standing partner to Ericsson and its main supplier in cabinets, as well as Ericsson Cables, for cable installation. The new situation creates both uneasiness and curiosity, far down the supplier chain. Some companies see risks in the new situation; others see opportunities.

Current situation

Since the Infocom Systems management, in conjunction with the changes that took place in Norrköping (Sweden) in late March, announced the new outsourcing strategy, the need for information regarding Ericsson's continued planning has become great. To allay the uneasiness of the component suppliers and resolve any remaining questions, Ericsson arranged an "information day" in Stockholm in mid-June. The information day drew 127 people – including representatives from some thirty companies and purchasing personnel from local Ericsson companies. They came to listen to Infocom Systems management, to learn more about the main suppliers' operations and to hear their views on their recently embarked-on cooperation with Ericsson.

The morning was devoted to Ericsson, and the speakers included business area manager Anders Igel. Hans Ahlinder, who is in charge of the global outsourcing strategy, gave a presentation of the preparatory work and outlined the road ahead for the near future. Then, the five new Ericsson suppliers gave brief presentations of their own operations and described how their provision of components will take place. During late fall 1997 Ericsson suppliers expect new purchase agreements will be made, by Ericsson and by the contracted manufacturers. Until then, business routines will proceed as usual.

Threats and opportunities

"It feels like we have been given all the information it's possible to get at the present time," remarked Börje Brandefelt, sales manager at Rifa, which has manufactured and sold condensers to Ericsson for the past ten years.

"For Rifa, which is a fairly large company with 2,000 employees and offices throughout the world, this can mean new opportunities, but there are also risks involved," Börje Brandefelt continues. "The competition is stiff in our niche, since condensers are a mature product, but we hope to be able to increase our deliveries in the future – provided we're still in the game after the autumn, of course."

According to Hans Ahlinder, Ericsson Infocom Systems will maintain its business relations with certain suppliers.

Maintain contact

"Ericsson will continue to have direct contact with suppliers of so-called strategic components such as a type of micro-electronics called asics, and opto-components. Since the strategy of the business area is based on concentrating operations to final assembly and testing, most of the purely circuit-board production, and consequently the supplier contacts, is transferred to partners. The acquisition of the new partners represents a major challenge for Ericsson, and means higher demands on all parties involved."

Open attitude essential

One of the Flextronics representatives at the seminar day, vice president Mike McNamara, felt that good communication is essential in all cooperation on all levels.

"It is essential in order for an operation of this size to work. In Flextronics, we plan to be very open vis-à-vis our key suppliers – for example, by inviting them to attend our board meetings, and through various other measures aimed at facilitating cooperation."

Hans Ahlinder added "At Ericsson, we realize that openness and forthright communication from our side, plus ensuring that everyone is involved and putting in their best effort, is a pre-requisite for the success of our outsourcing strategy."

LENA WIDEGREN

Infocom Systems new outsourcing strategy can begin

The agreement in brief

■ **"We are the first of the big telecom suppliers sign this kind of global outsourcing agreement," said Anders Igel, referring to Infocom System's July agreement with SCI and Solectron.**

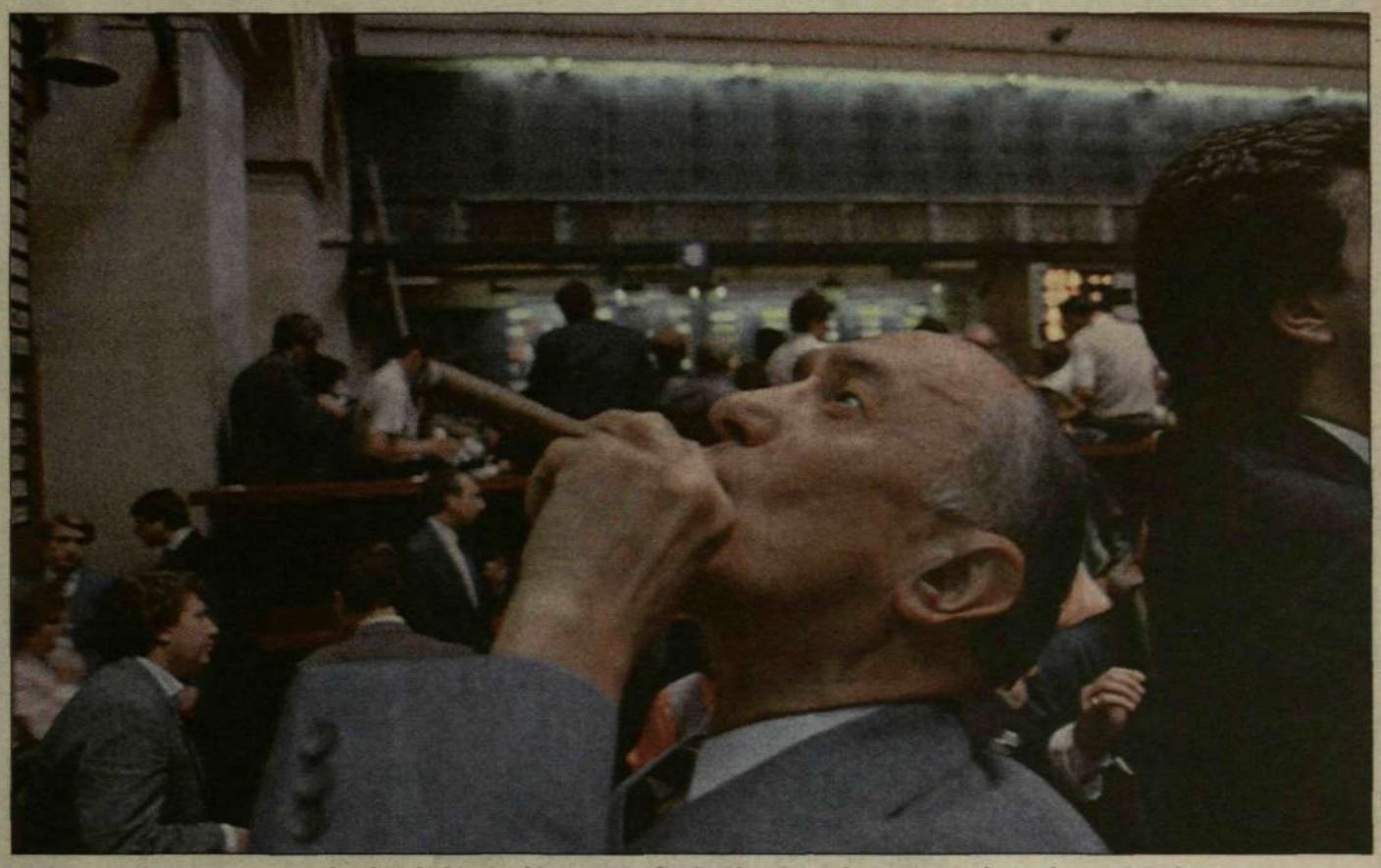
The agreement is final – unlike the declaration of intent announced on March 25 this year – and entirely in line with Ericsson Infocom System's outsourcing strategy. This strategy is about focusing on products and activities that require special expertise in telecom and data communications. It will enable the business area to concentrate its production operations on final assembly and testing. The production changes in Norrköping are an example of this.

The agreement also includes a declaration of intent from SCI regarding its assumption of all circuit-board manufacturing for Ericsson Infocom Systems in Leganés in Spain, which employs 350 people.

Solectron has signed a similar declaration of intent to assume the manufacturing of circuit boards in Sao José Dos Campos in Brazil, which also employs 350 people.

Ericsson offers convertible program to employees

Last week the Board of Directors proposed the issue of convertible debentures to Ericsson employees. A definitive decision will be made at an Extraordinary General Meeting to be held on September 11, 1997. The proposal means that Ericsson borrows SEK 6 billion from the employees who in return receive convertibles with a term of 5.5 years. This is a method for giving the employees an opportunity to participate in the value growth of the company on the stock exchange while Ericsson receives a capital contribution to finance its expansion.



In time, employees may opt to be shareholders, taking part in the development of Ericsson stocks on the Stock Exchange.
Photo: PRESSENS BILD

Ericsson's Board of Directors decided last week to propose the issue of convertible debentures to employees of the company with a maximum amount of SEK 6,000 million (USD 750 m). The proposal will be considered by an Extraordinary General Meeting on September 11, 1997.

The dramatic growth and development of the telecommunications industry continues to place high demands on Ericsson employees. In response, Ericsson has invested heavily in human resource development programs to maintain and strengthen its position in the industry. As a result, Ericsson employees are highly attractive on the labor market today, particularly to competitors, customers and other IT companies.

Opportunity to benefit

It is important, therefore, to be able to offer employees an opportunity to benefit from Ericsson's development in the same way as the shareholders, since the company's performance is dependent on their contributions. It is expected that a personal, long-term ownership commitment by employees will increase motivation, stimulate greater interest in the company's business operations and enhance a sense of loyalty to the company.

According to the terms of the proposed offer, employees will be able to subscribe for an amount of approximately SEK 75,000 (USD 9,375). The possibility for employees of Ericsson companies outside Sweden to subscribe for the debentures will vary depending on local law governing such investments (see below). Should the employees utilize their right to subscribe for an amount less than SEK 6,000 million (USD 750 m), this amount of the issue will allow future employees to be given the same opportunity to participate on market terms by AB Aulis, a wholly owned subsidiary of Telefonaktiebolaget LM Ericsson, which will subscribe for an amount, not exceeding SEK 1,125 m (USD 140 m). Additionally, interested employees will be allotted a further amount, but not more than SEK 150,000 (USD 18,750) in total, within SEK 6,000 million (USD 750 m).

The issue is estimated to result in a dilution effect in relation to Ericsson's share capital of 1–1.5 percent. The proposed term of the convertible debentures will be approximately five and a half years. The debentures will carry interest related to STIBOR (Stockholm Interbank interest rate, a low risk market-rate). Conversion may only take place to Ericsson Series B shares. The conversion price will be based on standard calculation models and the average share price quoted for Ericsson Series B shares on the Stockholm Stock Exchange during a measurement period in connection with the Extraordinary Shareholders Meeting on September 11, 1997.

The Board has also decided on an option program, which will be effective January 1, 1998, for top management and key personnel, approximately 500 people. This program is intended to stimulate greater interest among such employees for the enhancement of Ericsson's share value and improvement of earnings per share. In addition, the program is meant to attract and motivate top management and key personnel in this highly competitive industry.

The option program will grant top management and key personnel seven-year call options on Ericsson Series B shares. The options will be offered annually and will be acquired from brokers or banks at market price. The distribution of the options will be determined by the development of earnings per share and the base salary and bonus categories of the relevant employees.

Footnote: The proposal is denominated in Swedish krona, the figures in U.S. dollars are based on the editor's translation at current exchange rates and are only intended to provide an indication of the actual values.

The Ericsson share has had a very favourable development during the past 10 years. **Graphics: FINDATA**

Different national laws

■ Due to differences in national laws around the world, the convertible program cannot be offered to all employees on the same terms. These will depend on the country in which personnel are employed. Lists of the countries who may or may not participate in the program, as well as those countries in which the possibility to participate is under investigation, are provided here. No alternative offer will be made in countries in which participation is not permitted. More information will be published in forthcoming issues of Contact. There is a page on the Ericsson intranet under Inside Ericsson" at address: http://inside.ericsson.se/converti.htm which will contain updated information.

Participation status of countries

■ Argentina, Austria, Belgium, Brazil, Canada, China (and Hong Kong), Colombia, Denmark, Finland, France, Germany, Ireland, Italy, Lebanon, Malaysia, Netherlands, Norway, Philippines, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Taiwan, United Kingdom, USA, Venezuela.

Countries conducting their own investigation

■ Bolivia, Bulgaria, Chile, Costa Rica, Czech Republic, Ecuador, El Salvador, Estonia, Guatemala, Korea, Lithuania, Pakistan, Peru, Romania, Singapore, Slovakia, Sri Lanka, Uruguay.

Non-participating countries

■ Australia, Bahrain, Bosnia-Herzegovina, Croatia, Egypt, Greece, Hungary, India, Indonesia, Iran, Israel, Japan, Kazakstan, Kuwait, Libya, Mexico, Morocco, New Zealand, Nigeria, Oman, Saudi Arabia, Slovenia, South Africa, Thailand, Tunisia, Turkey, Ukraine, United Arab Emirates, Vietnam, Yugoslavia, Zimbabwe.

About a year and a half ago the Eliasson family prepared themselves, with great expectations, to move to China. Michael had been appointed project manager for the expansion of the GSM network. The project is now finished and the family is back in Sweden – the richer for the experience.

Kontakten nr 6 1997

Home again

One and a half years have gone. Rebecka, who used to hang like a little frog on her Daddy's shoulder has become a determined young lady, who can both manage a popsicle all by herself and cover the windows with hand prints. Many things have happened and the rest of the family has changed, too, though it may not show as much as it does on Rebecka.

"I have gained in self-knowledge and acquired more self-confidence," says Michael. Having had to handle more responsibility than in Sweden and deal with the most unexpected situations, now it feels like I could handle anything. I've also learned a lot about how people work, about relationships and cooperation."

Helena agrees that their stay in China has given them more confidence: "You get used to always having problems to solve, so it seems like nothing is impossible anymore. I have also learned make demands much more than before – it was simply necessary."

Intense work schedule

Michael was project manager for the expansion of the GSM network, based first in Beijing and then in Shanghai. In Shanghai he also trained one of the Chinese employees to succeed him as project manager. He was in China for nine months without the family, so of course he was happy when they finally arrived. Finally, he could check out of his hotel room, move into a house and have his children with him – Kristoffer and little Rebecka, three months. However, the long-sought family idyll was not easy to achieve.

"The work was extremely intense – long days and much traveling. I traveled two to three days a week, often to Nanjing - which became one of Rebecka's first words."

Traveling in China was a feat in itself, to judge from Michael's description – unreliable scheduling, departures that did not take place, and so on. He often arrived home tired and irritated, longing to relax in the bosom of his family, but instead he'd be met with a three-year-old just dying to climb all over Daddy, a crying baby and a wife who needed to ventilate the problems she'd had during the day.

Richer for the experience

It can be hard for a Westerner to adjust to life in China. Michael and Helena prefer not to call it "culture shock;" rather "cultural head-on collision."

"Naturally there were language problems, but not only that," says Helena. "People prefer to answer a question incorrectly than admit they don't know, which can really put a spanner in the works."

"Not until nine months before we were to leave did I feel I had really adapted to the Chinese mentality," relates Mikael. "I had finally come to understand the politics that were constantly at work in the customer's camp. I noticed that I got a better response from them when I changed my behavior. The Chinese assistants were invaluable in helping me to understand the culture better," Michael thinks.

Noisy and dirty

The Ericsson office in Shanghai has certainly grown quickly, from 40 people in 1995 to 150 today – but it's still relatively small. There are only six or seven Swedes working there, plus two or three people from other countries.

Kristoffer, just turned three, was put in school. Clad in a uniform, he'd be picked up by the schoolbus at twenty after seven every weekday morning. At the school, they spoke both English and Chinese, and there was no language training to speak of. Sounds tough but it worked out well. Kristoffer enjoyed himself and Mikael and Helena think it was a good experience for him.

"He has also developed more self-confidence. He now asserts himself more than he did before. It's also nice that he has played with children of many nationalities, when you think of how racism is spreading."

When Kristoffer was at school, Helena would take Rebecka to a mother-and-baby group arranged by the accompanying wives from various countries, or else she would take a taxi and go shopping.

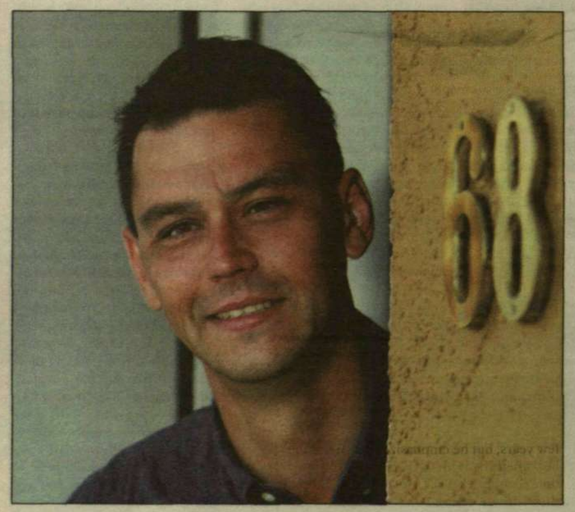
Trying experience

Shanghai is a big city – noisy and dirty.

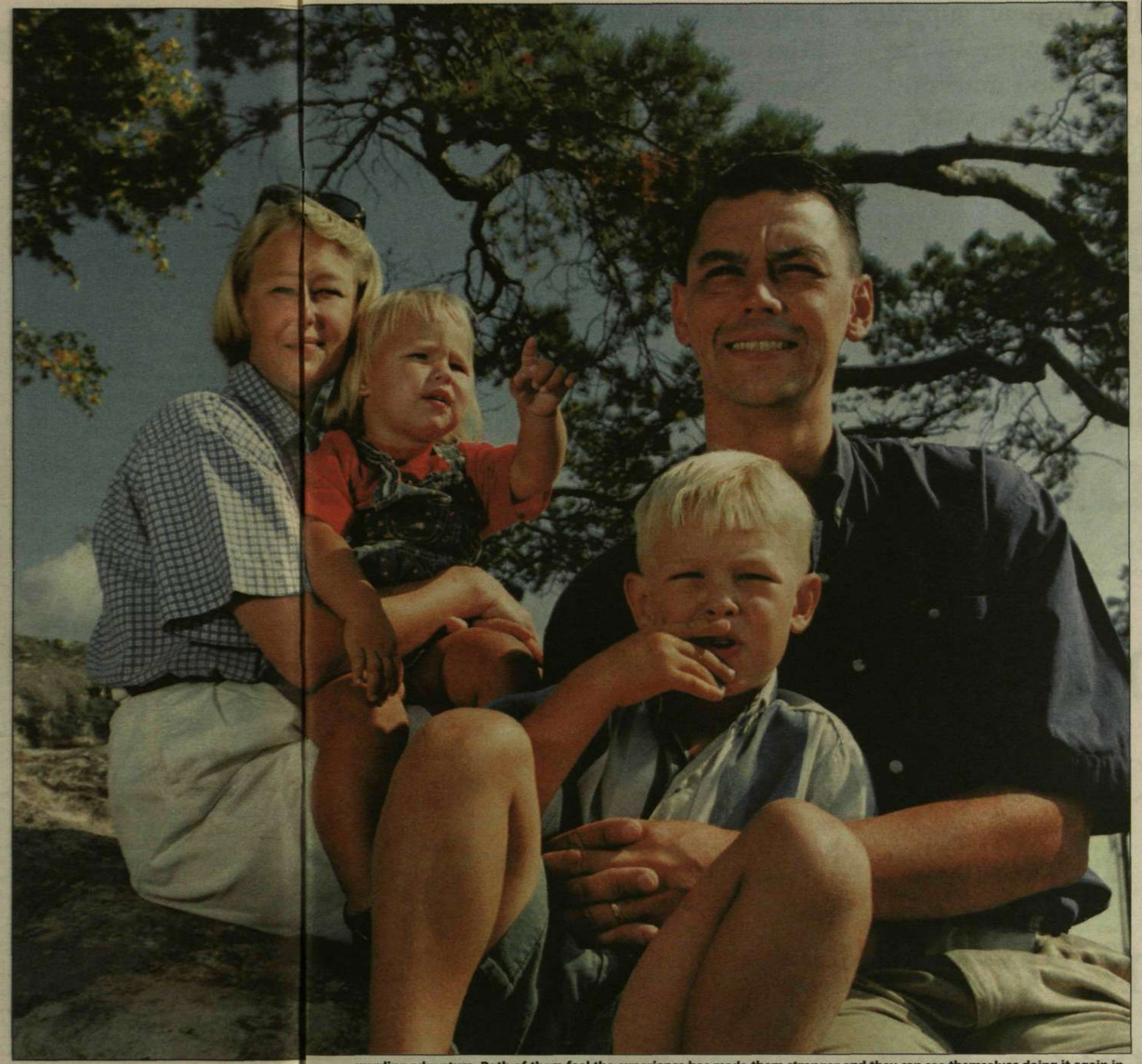
The Eliassons lived in a residential area on the outskirts of the city, populated almost exclusively by foreign workers of various nationalities. There, things was fairly calm. Being in the center of the city, however, could be a trying experience.

"The noise level is unbelievably high, all the time. There was construction work going on everywhere and the traffic was insane," Helena explains.

"Everything's really dirty, the kids were covered in grime after being out a whole day and the house had to be cleaned every day. Plus, the air was low on oxygen so you'd get very tired. In the evenings, once the kids had gone to bed, you didn't have the energy to do much more," Michael adds.



"I think I've become more mature," says Mikael Eliasson. "China is the best school you could have –development is just going so fast and you have to be right on top of everything."



Helena and Mikael consider their one-and-a-half-year sojourn in China a rewarding adventure. Both of them feel the experience has made them stronger and they can see themselves doing it again in a few years. Photo: GUNNAR ASK

More mature

There was a lot that was difficult and new problems surfaced all the time, but after being home a short period, both Michael and Helena feel the negative aspects have begun to fade, while the positive remain.

"I was a fantastic experience meeting women of so many different nationalities and get to know them. I've come to realize that material things aren't the most important. It's the small things that really mean something, like being able to walk in the woods. I have learned to appreciate the schools and health care here at home, and the fact that women have the same opportunities to work as men. It's disappointing to come back and hear everyone complaining when you yourself are so proud of being Swedish," says Helena.

"I think I've become more mature," says Mikael. China is the best school you could have, development is going so fast and you have to be right on top of everything."

Tips to other families

Their advice to families taking an international position is not to have too high expectations, and to try to talk with someone who has recently been in the country. It's particularly important for someone who's going to work in the country to get information about local customs, Mikael believes, adding:

"Take initiative, get in touch with people, investigate things yourself and make your own arrangements. Be prepared to accept that the spouse who is working will work long hours; the other spouse will have to take care of the house. And remember that you are a guest in the country."

Mikael would gladly take off again in a few years, but he emphasizes that it has to be something both of them want. For the time being, it's back to ordinary life in their row house in a suburb of Stockholm, with jobs for both of them and day-care for the children.

LENA GRANSTRÖM

hello there!

How's the environmental project doing, Doctor?

Hans Bundgaard of the Ericsson Group Quality Department has recently been awarded a Ph.D. in strategic industrial environmental research by the Danish Institute of Technology.

"Sustainable Development as a Concern for Industrial Companies" is a doctoral thesis on strategic environmental initiatives, or how companies find their rightful place in the environmental dimension. This thesis has been jointly sponsored by the Nordic Industrial Fund and Ericsson, with Ericsson paying about half the cost.

What is the most important aspect of the environmental process?

"Above all, the environment is a matter of business. For IT companies, the environment represents an opportunity, rather than a threat. On the other hand, there could be some risks if you fail to seize the opportunity.

How much progress has Ericsson made?

"We are still in the early stages of a long process. So far, we have not been so successful in managing environmental aspects that we can claim that we have directly strengthened our business position. To do this, we would have to analyze new participants in the market and trends and values – that is to say become much better at interpreting changes in our surroundings.

"There has been a great deal going on here at Ericsson since I started here in 1993. At that time, there was no environmental department. Today, six Ericsson companies have ISO 14001 certification – three in Spain, one in the UK, one in Holland and one in India. Next year, we reckon to have a further twenty certified companies and, by the turn of the century, at least 100."

How should we build support for environmental programs?

"As a result of a deliberate management focus. Traditional, well-established working methods have to be questioned sometimes, and re-examined. The environmental aspect has to be integrated into operations.

"As a good corporate citizen, Ericsson's operations must focus on what is good for society. This may mean producing environmentally compatible telecom equipment or establishing services which can be used to improve the environment. The main point is that the environment is treated as a major operational factor and is not merely regarded as a question of disposable coffee mugs.

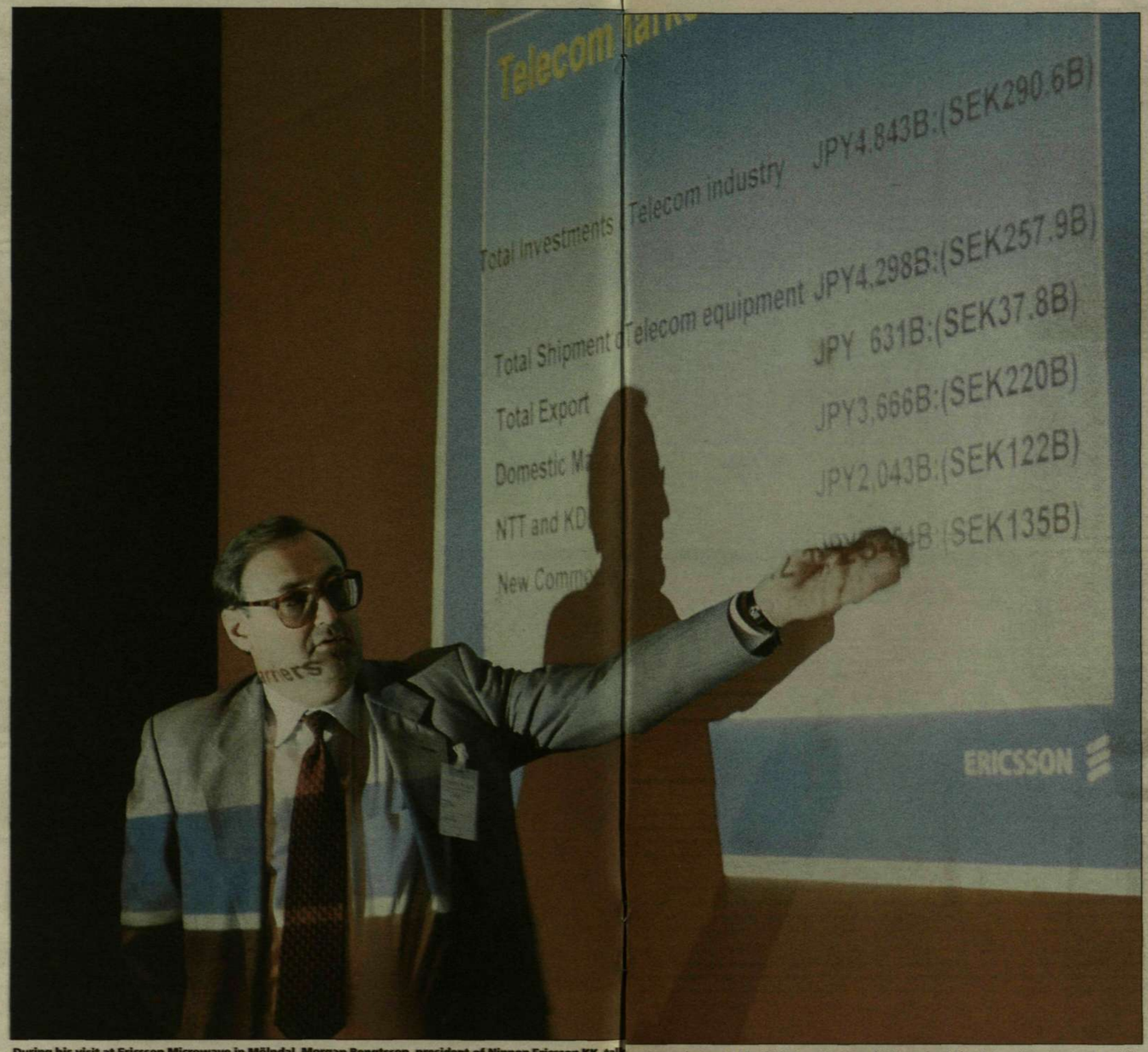
"In addition, the environment can also be an important aspect of our brand image, but then we have to have something which will stand up to serious scrutiny."

BRITT-MARIE WIHDÉN

Ericsson is the only European supplier, and today the largest supplier, in the Japanese mobile telephone market. The key to this success is the MDE base stations developed by Ericsson Microwave Systems in Mölndal Sweden. Morgan Bengtsson, president of Ericsson's Japanese company Nippon Ericsson KK, recently visited Mölndal to talk about the demanding requirements of the Japanese mobile telephone market.

Magnus Granholm demonstrates the technology that the division is developing.

MDE – Ericsson's key to the Japanese market



During his visit at Ericsson Microwave in Mölndal, Morgan Bengtsson, president of Nippon Ericsson KK, talk[s] with employees at the MDE Base Stations division about the demanding Japanese mobile telephone market.
Photo: MARIE ULLNERT/KAMERAREPORTAGE

The Japanese market for digital mobile telephony is the world's largest. It is a market that is growing fast, with a huge demand for new applications and products. Japanese cellular operators and their suppliers are under enormous pressure.

Japan's largest operator, which is also the world's largest, is NTT DoCoMo. Currently the only operator to provide coverage of all of Japan's nine regions, NTT DoCoMo must fulfill the high expectations placed on the market leader. Ericsson's contacts with NTT DoCoMo are managed via Ericsson's subsidiary Nippon Ericsson KK (NRJ), whose president Morgan Bengtsson recently visited Ericsson Microwave to talk about the demanding Japanese mobile telephone market and his contacts with NTT DoCoMo.

Excellent relations

The close collaboration between the companies started with the introduction of digital mobile telephony in the Japanese market in 1991. Today, NTT DoCoMo is both Ericsson's customer and partner, and the operator's Japanese engineers work together with their Swedish colleagues in the development of new applications and products. This collaboration is unique in the cellular industry, and the excellent relations between the two companies have been a prerequisite for Ericsson's ability to do business with other Japanese mobile telephone operators.

"It is extremely important to be successful as a supplier to DoCoMo in order to be considered by other operators," explains Morgan. "Successful collaboration with NTT, which is a very demanding customer, is regarded by the other operators as a guarantee of high quality."

The cooperation between the two companies began when NTT decided to purchase Ericsson base station[s] for its digital mobile telephone network. These base stations w[ere] developed by Ericsson Microwave Systems in Mölndal, and Mo[rgan] Bengtsson is careful to emphasize the importance of this first c[on]tract for the development of Ericsson's marketing efforts in Japan.

Third generation

"The MDE base stations have played an [extr]emely important strategic role in establishing Ericsson's mark[et] position in Japan," says Morgan. "In fact, you could say that the MDE base stations were the key to the entire Japanese mobile telephone market. Marketing of MDE base stations has not only resulted in sales to other operators. It has also resulted in NTT selecting Ericsson as a partner for the development of a test system for a third-generation mobile telephone platform."

The third-generation mobile telephone system, Wideband CDMA, will allow broadband transmission of voice, data and video over a wireless network. Ericsson has been selected by NTT to develop the first experimental system, which will be delivered in late-1997. Morgan Bengtsson expects that the first commercial systems will be taken into operation by the year 2001.

NICLAS HENNINGSSON

The micro base station developed by the MDE Base Station division of Ericsson Microwave Systems will be used by Japanese mobile telephone operator NTT DoCoMo to increase coverage in rural areas. Contacts with NTT DoCoMo have been managed by Nippon Ericsson KK's president Morgan Bengtsson.

The demands on suppliers are high

The demands placed on suppliers in the Japanese mobile telephone market are high. This applies particularly to suppliers to NTT DoCoMo, Japan's leading operator of cellular networks. The MDE Base Station division at Ericsson Microwave in Mölndal, Sweden sells its base stations to NTT DoCoMo and has succeeded in the face of stiff competition in the Japanese market.

During the summer, the first deliveries were made of the new micro base station, which is the latest product in Ericsson Microwave's portfolio. The micro base station will be used to increase coverage in rural areas. Ericsson is the only supplier of high-power micro base stations for outdoor use in the Japanese market.

As the name implies, a micro base station is significantly smaller than a normal base station. It is easy to install and covers a large area. The fact that capacity is lower, compared with a standard base station, is less important, since the micro base station is intended to extend coverage to sparsely populated areas where traffic is low.

The demand is great

Kent Walther is the project manager for the development of micro base stations at the MDE Base Station division. According to Kent, demand in the Japanese market for the new base stations is great.

"We have delivered two test systems, which performed perfectly from the start," relates Kent. "Now only some fine tuning remains before NTT DoCoMo's formal approval of the micro base station at the end of August. However, we are beginning volume production of the new base station in advance of approval in order to be able to deliver micro base stations at a rate that will meet demand."

Close cooperation

The development of the micro base station is typical for the cooperation between Ericsson and NTT DoCoMo. NTT is both a customer and a partner, and the Japanese engineers work closely with their Swedish colleagues. Kent Walther and his colleagues have traveled to Japan every other month, and the fax traffic has been intense.

NTT DoCoMo always tries to make sure that there is more than one supplier for new applications. Suppliers compete with each other, and the one that provides the best product gets the lion's share of the order.

One example where Ericsson was most successful among competing suppliers, including Japan's NEC, is in the development of P-MDE, a base station designed for data transmission rather than voice. Like the micro base station, the P-MDE, where the "P" designated packet data, was developed by the MDE Base Station division. The first version is already in operation in the Tokyo region, and as NTT DoCoMo now mounts a campaign to promote packet data services in other regions, new, enhanced versions of P-MDE are being developed.

High traffic density

The next major project for the MDE Base Stations division is the development of High Density MDE. This base station will have high capacity and be designed for use in areas with high traffic density. The MDE Base Station division got a late start in the development of this product. The technology was not regarded as having sufficient potential for the future, an assessment that eventually proved to be incorrect.

"We're about six months behind in the development of High Density MDE, compared with our competitors," reveals Erik Löwenadler, who heads the MDE Base Station division.

"Now we are working hard to catch up. We have to have a product ready by November of this year. As a supplier to the Japanese market, it is essential to defend your position in all segments, if you want to be a contender in future contracts."

WHAT DOES INFORMATION FEEL LIKE?

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WHAT CAN WE BUILD FOR YOU?™

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YOU TELL US.

Ericsson Austria has initiated a major poster campaign. The aim is to increase exposure of the Ericsson name in Austria and to underline the company's global position.

Photo: THORD ANDERSSON

Eye-catching advertising

Readers passing through Vienna during June this year can hardly have escaped seeing Ericsson Austria's extensive poster campaign. The Ericsson name has been exposed in a highly eye-catching way on posters occupying 1,000 strategically located sites around the city.

A two-by-five-meter portrait of a pretty young girl beneath the headline "Östereich und die Welt. Ericsson verbindet Sie," immediately captures the eye.

As you look more closely, you realize that the face combines the features of a white and a black girl. This creates a powerful, yet sensitive overall effect. It's amazing what can be achieved with advanced computer graphics!

The idea behind the campaign is to increase exposure of the corporate name in Austria and to underline Ericsson's global position. At the time of writing, negotiations are in progress to determine which consortium will be selected to construct the third mobile telephone network in Austria. A number of observers consider that Ericsson has a good chance of becoming the supplier to this network.

The June poster campaign is part of a larger program initiated by Wolfgang Teischl, Ericsson Austria's advertising manager. Assisting him is the Dr. Puttner Bates advertising agency.

During four weeks in April, five different theme advertisements were placed in a number of Austria's leading daily and industrial press, including Die Presse, Kurier, Wirtschafsblatt, Profil, Industrie and Salzburger Nachrichten.

Five themes

Freely translated, the campaign's five themes were: Austria and the world, Freedom and security, The old and the new world, Work and the family, and Trends and traditions. All of the ad visuals show two faces that merge with each other to illustrate the human aspects which create affinities between people from different cultures, professional backgrounds and age groups. The breadth of Ericsson's communications solutions is deftly woven into the accompanying texts.

Thirty five advertising insertions were made during the campaign period.

Striving for world peace

A second poster campaign, again using 1,000 poster sites throughout Vienna, will be undertaken in September. Towards the end of the year, a follow-up study will be made to establish the campaign's effect on the general public.

It is already apparent that the campaign has aroused a great deal of interest. Among other reactions, Kurir, a leading daily newspaper, has voted the Ericsson promotional program the campaign of the month. The underlying message of the campaign has been linked with efforts to bring about peace in the world.

THORD ANDERSSON

There's a sure way of showing off your success and status in the Vietnamese capital. Nonchalantly, you park your Honda Dream II on the sidewalk, as close as possible to the international café on Lake Hoan Kiem. You then order a double expresso and casually take out an Ericsson GF788 to check in with your flourishing family business.

An 'Ericsson' provides status

In Vietnam, as in Europe, there is a great deal of status attached to mobile telephones.

And in a country that was having difficulty in feeding its inhabitants as recently as a decade ago, there is now nothing which arouses greater envy than possession of a mobile telephone from Ericsson – preferably the latest and most expensive model.

Ericsson has acquired a unique position for itself in Vietnam. The Swedish company supplies 60 percent of the mobile phones sold here. The main competitor is Motorola, which currently has a 25-percent share of the market.

Greatest priority

Telecommunications is one of the areas assigned the greatest priority by the Vietnamese authorities. During the 1990s, the market has grown by 60–70 percent annually and is showing no signs of weakening.

And nowhere is all this more visible than on the streets of Hanoi and Ho Chi Minh City (formerly Saigon).

In 1995, the three mobile telephone networks had 30,000 subscribers. A year later, the number of subscribers was doubled, to 60,000. This year it is anticipated that the figure will exceed 100,000 by a wide margin.

And the market is enormous. With a population of 75 million, Vietnam still has only two telephones per 1,000 inhabitants. Only one Vietnamese in a thousand has a mobile phone tucked away in an inside pocket (compared with an extreme case like Sweden, where the corresponding density is 300 per 1000 inhabitants).

More than half

The market for mobile phones is concentrated to the capital, Hanoi, in the north, which has a population of four million, and to Ho Chi Minh City in the south, which has a population of seven million. These two cities account for 85 percent of all mobile phones sold – and more than half of them are from Ericsson.

There are many reasons for Ericsson's success in this country. Per Karlberg is president of Ericsson Vietnam. He came here in 1995 and has experienced two extremely hectic years.

We meet on a humid high-summer day in the company's new head office, which is located on the tenth floor of the Daeha Business Center in Hanoi.

Long-term work

"The main reasons for our success are that we were here at an early stage and that we worked with long-term goals. When the U.S. lifted its trade embargo in 1994 and business took off, we already knew how the market was structured.

"We knew that quality was an important selling point, despite Vietnam being classified as a developing country. Price is not such an important consideration here, as it is in Europe. Cheaper products can easily gain a poor reputation. Campaigns based on price can damage a product's image."

Germany's Siemens made a fatal mistake by launching a campaign on the theme, "Buy one mobile phone – take two home with you." When the campaign was over, the status of a Siemens' mobile phone had dropped through the floor. Sales have yet to recover.

Discriminating shoppers

"Status, being able to tangibly demonstrate one's position in the social hierarchy, is an extremely important aspect in Vietnam. The decision to purchase a mobile phone is often taken jointly, by an entire family. Long and careful consideration is given to the selection process. In many cases, several people will be sharing the use of the phone," says Karlberg.

"The Vietnamese accumulate a great deal of know-how about the phone they are planning to purchase. That is why product information is a vital part of our advertising campaigns."

Cecilia Storakers Hjelmstedt is responsible for Ericsson's marketing in Vietnam:

"Motorcycles, particularly Hondas, are an important status symbol for the new Vietnamese middle-class. Thus, in our efforts to understand purchasing behavior, we made a close study of Honda' success in this market.

"We interviewed people, asked why they had specifically chosen a Honda, drew parallels and learned from the process."

The experiences gained obviously produced results. Ericsson's mobile phones dominate the market and there is nothing to indicate that this situation is likely to change.

Per Karlberg is president of Ericsson Vietnam.

Cecilia Storakers Hjelmstedt is responsible for Ericsson's marketing in Vietnam.

The headoffice Daeha Business Center in Hanoi.

Ericsson dominates mobile market

With an estimated 57 percent share of all sales, Ericsson dominates the Vietnamese mobile telephone market. Motorola has 26 percent, Nokia 9 percent and Siemens 5 percent of the market.

Vietnam has three network operators, all of which are connected to the government in some way.

The first was Call-Link, a local venture between the telephone administration in Ho Chi Minh City and Singapore Telecom. The network covers primarily South Vietnam and the area surrounding Ho Chi Minh City.

In April 1994, the first GSM system was put in operation. This system has been expanded through cooperation between Vietnam Mobile Telecom Service (VMS), which belongs to the government-owned Post &Telegraph Administration (VNPT), and Comvik International Vietnam AB The system, which is called MobiFone, is licensed to cover the entire country and dominates the market by accounting for 70–80 percent of all subscribers, operating 200 stores and holding 60–70 percent of all mobile phone sales.

A year ago, Vietnam gained another national mobile network in the form of VNPT, which launched itself into the market. Motorola has invested 10.3 million dollars in technical equipment. The new operator is called Vinaphone and is expected to become a tough competitor to its own offshoot, MobiFone.

Today, a network subscription costs about SEK 1,000 in connection charges. The monthly subscription fee is about SEK 150. A normal call costs approximately SEK 1.50, much less than in Sweden, for example. The average Vietnamese is a model mobile customer. He/she uses the phone for about 18 minutes each day. However, Singapore subscribers are the heaviest users in the region, spending about 21 minutes a day with mobiles pressed to their ears.

MobiFone, one of Ericsson's distributors.

Occasionally, some criticism is leveled at the company. Competitors complain that Ericsson's close cooperation with the main operator, MobiFone-VMS, is reflected in its sales figures: "When a customer signs up for a subscription, the sales person shows eight Ericsson phones, one Nokia and one Motorola."

True or false – business in Vietnam is based heavily on time and mutual trust.

Early start

When Vietnam reopened for business with the rest of the world, Ericsson was one of the earliest players to establish operations in a country which was regarded by many as one of the more hopelessly neglected developing countries.

Ericsson Australia installed an international AXE exchange in Ho Chi Minh City as early as 1991 and a year later it was the capital Hanoi's turn. Today, these "pioneer" exchanges have been replaced by two more modern AXE exchanges. A third international exchange was installed in Da Nang in 1996. Today, Vietnam has 12,000 international lines, compared with nine (!) ten years ago. Per Karlberg:

"The international lines are sufficient to meet the country's current needs. On the other hand, a real shortage of lines exists in the national network. Two telephones per 100 inhabitants, and 100,000 mobiles in a country with a population of 75 million."

Strong growth

"During the entire nineties, Vietnam's GNP has grown steadily, by 8-10 percent, annually. The Vietnamese themselves believe that this rate of growth will continue and I personally subscribe to this estimate," says Per Karlberg.

"The political system is stable and the authorities have major opportunities to stimulate the economic trend. The infrastructure remains undeveloped and telecommunications is now a prioritized area."

In other words, Vietnam has brilliant future prospects, albeit in a somewhat different business climate.

Today, the pricing of mobile telephones is governed by new restrictions. Operators may no longer attract subscribers with offers that are below 95 percent of actual value.

Furthermore, the National Assembly recently introduced a law which provides the local People's Committees with greater influence over advertising and marketing.

Newcomers to the Vietnamese business community can easily become irritated and complain about the complicated regulations, the time-consuming decision-making processes and investments which do not generate sufficiently rapid returns. Many of them quite simply give up and go home.

"Things tend to take a little longer over here," says Per Karlberg. You have to be aware of this from the outset. When in Rome, etc. We are here with the intention of achieving long-term goals."

TEXT AND PHOTOGRAPHS: LEIF OLDENBURG

Ericsson featured at Paris Air Show

This year's Paris Air Show displayed several new items from Ericsson. Ericsson Microwave Systems presented its cooperation with the Brazilian aircraft manufacturer Embraer and the recently formed Ericsson Saab Avionics company participated for the first time with its own exhibit.

paris

Another highlight was the observation of the second anniversary of Saab/BAe, Saab's and British Aerospace's joint sales company for the export launch of Gripen.

During the third week of June, this year's installment of the Paris Air Show drew over 300,000 visitors and included over 1,700 exhibitors. Everything from the largest Airbus aircraft to trolleys for airline food service was displayed on a floor-space of nearly 75,000 square meters.

Cooperation in focus

Much attention was given to the presentation of the cooperation between Ericsson Microwave and the Brazilian aircraft manufacturer, Embraer. The companies, which are already cooperating on the Sivam project for surveillance of the airspace over the Amazon valley, will now jointly market a surveillance system involving the new Embraer jetplane EMB-145 as the carrier of Ericsson Microwave's Erieye airborne tracking radar.

"This cooperation with Embraer gives us extra impact in the South-American market," said the manager of the AEW division of Ericsson Microwave, Lennart Joelsson, when the cooperation was announced.

The exhibition in Paris marked the second anniversary of the joint sales company of Saab and British Aerospace, Saab/BAe, established for the export launch of the Gripen. The venture was first announced at the 1995 Paris Air Show. At a well-attended press conference, Saab president Bengt Halse said that after two years of marriage the companies are still in love. At present, Saab/BAe is running sales campaigns in ten countries. Within 10 to 18 months it is hoped that the first serious transaction will be underway.

Complete model

There was no Gripen at the Paris Air Show, but a full-scale model of the aircraft provided the opportunity to demonstrate various armament alternatives. The visitors to the Saab exhibit could also have a go at sitting in a complete model of a Gripen cockpit.

The Gripen aircraft did not fly at the Paris Air Show at the beginning of the summer. Instead, Saab/BAe – which is launching the Gripen internationally – chose to exhibit various alternative armaments on a full-scale model of the aircraft.

In a stand shared with the other members of the Old Crows – a group of companies operating in products for distance warfare – Ericsson Saab Avionics, ESB, presented selections from its product range. ESB, a subsidiary jointly owned by Ericsson Microwave and Saab, was established at the end of last year. This was the first time the company has appeared at a major European air show.

TEXT AND PHOTO: NICLAS HENNINGSSON

Job hunting in Kista

■ Some 22 colleagues from Ericsson's Norrköping plant visited the Kista facility at the beginning of June. Ericsson Radio Access made a presentation of its operations and described the vacancies that existed within the production area. The visit was arranged in connection with the personnel cuts being made in Norrköping. An additional 35 colleagues were due to visit Kista later the same month.

kista

The workforce reductions planned for the Norrköping plant will have a major impact on many, which is why efforts are being made within Ericsson to find alternative jobs. Ericsson Radio Access needs to recruit both operators and production technicians. Anna-Greta Eriksson and Madelaine Koch from the personnel department were responsible for arranging the visits.

"We organized a one-day visit to the plant," notes Madelaine. "In addition to a presentation of the operations, the visitors were given a guided tour of the facility. But the most important point was that all of the Norrköping personnel had individual discussions with a representative of the Kista personnel department and with the plant managers.

"Many inquired about housing in the area," continues Madelaine. "And we know that this is not one of the most easily resolved problems. We therefore need to find some alternatives."

KARIN RONANDER

Space Girls best Ericsson entry

The "Dragon Boats" rowing event has grown to become a popular event even outside Stockholm. A total of 48 crews, ten of them from within Ericsson, entered this year's Dragon Boats competition in Nynäshamn on July 26–27.

nynäshamn

The arranger of the competition this year was Nynäshamn's Sailing Association's Canoe Section, while Ericsson and the Nynäshamnsposten, a local newspaper, were the main sponsors.

The competition was arranged in connection with the town's annual harbor festival. The events are based on small Dragon Class boats, manned by 13-man crews – at least two of whom must be women paddlers in the standard boats –with 13 females manning the women's class boats.

As a reward for their efforts, the two best Ericsson boats among the standard paddlers get to paddle in the Lake Karlsberg competition on August 14. This year, the best boats were "Ericsson's Hybrider" (the Hybrids) and the "Paddelskvätterna" (the Paddle Splashers). These two will now build a joint team to defend the second place gained a year ago in this competition.

Despite the fact that they had a slower time than the Hybrids and the Splashers, Ericsson's Space Girls were considered the best in their class in the Nynäshamn competition.

The girls in the crew were third overall in the finals and will have to be satisfied with traveling to Stockholm to cheer on "Ericsson Elite Nynäshamn," the boat which will compete in Nynäshamn's colors in this year's Dragon Boat Festival on August 14.

BERT BJÖRKLING

Ericsson's Space Girls were best in their class in this year's Dragon Boats Race in Nynäshamn.

Photo: BERT BJÖRKLING

Ericsson hosts Asia Festival

During three days in July, the Kungsträgården royal gardens area in central stockholm Stockholm was transformed into an Asian setting. More than 70,000 people visited the Asia Festival on July 4-6, for which Ericsson was one of the main sponsors.

Leif Bölke from Ericsson Communications was festival host for the special Ericsson day on July 5. He could take pleasure from the appreciative comments made by the many Ericsson colleagues among the visitors, and from the ambassadors of three important customer countries – China, the Philippines and India, all of whom attended the festival. In addition to introducing performers from many Asian countries, the opportunity was naturally also taken to provide audiences with information about Ericsson's operations in the countries in question.

Satisfactory first half for Ericsson Saab Avionics

Consolidation of the company's role as leading supplier to the Gripen aircraft project and the development of new products for new markets. That is how Ericsson Saab Avionics, Ericsson Microwave's and linköping Saab's jointly owned subsidiary will prepare itself to meet future challenges.

This was part of company president Björn Erman's message when Avionics' employees met in Linköping at the beginning of the summer to discuss strategies for the future.

Ericsson Saab Avionics, ESB, was formed at year-end 1996 through the merger of certain of the operations of Ericsson Microwave, Saab Dynamics and Saab Military Aircraft. The company's 600 employees in Jönköping, Linköping and Kista work with aircraft electronics and most of the products are produced for the JAS 39 Gripen. Among other items, ESB makes the aircraft's radar and control displays, as well as equipment for disrupting enemy radar.

Strategies for the future

At the beginning of June virtually the whole of ESB's workforce assembled at a large meeting in Linköping's amusement park. The idea behind the meeting was to provide the former Ericsson Microwave and Saab employees with an opportunity to get to know each other and to discuss how the company should meet prepare its strategies to meet future challenges.

Company president Björn Erman informed the employees about the current situation and gave his views on the future development of Ericsson Saab Avionics.

"It is almost certain that defense allocations will continue to decrease, so we cannot base the whole of our business on the continued sale of Gripen aircraft to the Swedish defense forces. If we are to remain successful, we must consolidate our position as the leading supplier to the Gripen, while at the same time finding new products and markets. These will be the two main areas of operation in future."

"As defense budgets contract, we must develop new products and find new markets," says Björn Erman, President of Ericsson Saab Avionics, at Avionics Day in Linköping at the beginning of the summer.

Photo: SIV WIRSENIUS.

Attractive areas

The meeting in Linköping was concluded with a dinner and entertainment. At the end of the day, both the employees and management appeared satisfied with the new company's first six months of operation. Björn Erman viewed the future with optimism:

"We are active in a highly attractive field!"

NICLAS HENNINGSSON

Ericsson in presidential visit

Ericsson's operations in Turkey are currently very successful. Not simply in terms of business but also when it involves meeting the country's top executives. On ankara June 6, Johan Bruce, president of Ericsson's Turkish company, was granted an audience with Turkey's President, Süleyman Demirel. The meeting was also attended by Ahmet Mete, representing the management of Ericsson's Turkish company.

Johan Bruce presented the Turkish President with an Ericsson GF788 telephone and took the opportunity to describe Ericsson's long-established operations in the country. These stretch way back to the 1890s, when Ericsson installed a telephone line in the well-known Dolmabahcepa Palace, a line which is still in operation. In 1925, Ericsson delivered a 2,400-subscriber network to Izmir and the surrounding provinces. The network was operated by Ericsson Türk, which was the first wholly foreign owned company to be established in Turkey.

During the 1950s and 1960s, Ericsson was the leading supplier to the Turkish Telecom Administration. In 1986, Ericsson Telekomünikasyon A.S. was established, the aim of which was to represent the entire Ericsson organization in Turkey.

Johan Bruce, President of Ericsson's Turkish company, and the President of Turkey, Süleyman Demiral. Ahmet Mete from the Turkish company, Ericsson Cukorova A.S. (??), also took part in this top-level meeting.

Today, Ericsson is a leading supplier of GSM equipment to Turkcell, one of the country's operators. In 1995, Ericsson Cukorova Telekom A.S. was founded, a company which produces exchanges and transmission equipment in Ankara for both the domestic and international markets.

The Turkish company is active in such export markets as Iran, Pakistan and the Middle East, while also delivering GSM networks to the former Sovjet repblics Azerbaijan and Georgia.

New training center

Amid reat pomp and ceremony, Ericsson's new training center in Haslemere in the U.K. was officially opened on June 6. Britain's Minister for Research, Energy and Industry, John Battle, and the Chairman of Britain's National Committee of haslemere Inquiry into Higher Education, Sir Ron Dearing, ably assisted by Ericsson CEO Lars Ramqvist, performed the inauguration ceremony.

Among the 100 guests attending the opening were Sweden's Ambassador to the U.K., Mats Berquist, the local mayor and the local Member of Parliament.

"Companies that invest in the training of their employees raise not only the level of job satisfaction but also the quality and efficiency of the operation in general," noted John Battle in his address. He expressed his appreciation of Ericsson's investment in the internal and customer training areas and noted that he was pleased to be associated with the opening of such a center.

Lifetime of learning

Lars Ramqvist reported that the new Center involves a concentration of Ericsson's training resources to Haslemere. Here, customers can be offered customized, interactive training. The training of customers and employees is an important element in Ericsson's vision for the future.

"Within Ericsson, we aim to offer employees an environment that encourages them to a lifetime of learning," he said.

Chairman of Britain's National Committee of Inquiry into Higher Education, Sir Ron Dearing, cuts the ribbon, assisted by Ericsson CEO Lars Ramqvist. Photo: RICHARD BOOTH

The new Center offers not only the latest technical training aids, it also features fully functional Ericsson products, such as the GSM and PSM networks, international and local AXE exchanges, Consono equipment and much more.

In addition to training facilities, the center also has 59 rooms for guest students, a first-class restaurant and bar, and a range of other services designed to make life easier for Ericsson's "students." These include a heated outdoor swimming pool, three tennis courts, and areas for playing soccer, croquet and golf.

The property in which the Center is located is owned by a British conference company, but the operation is managed by Ericsson Ltd. In order to start up and develop its training operations as quickly as possible, the British company has entered into a strategic cooperation agreement with Ericsson's training center in Dublin, Ireland.

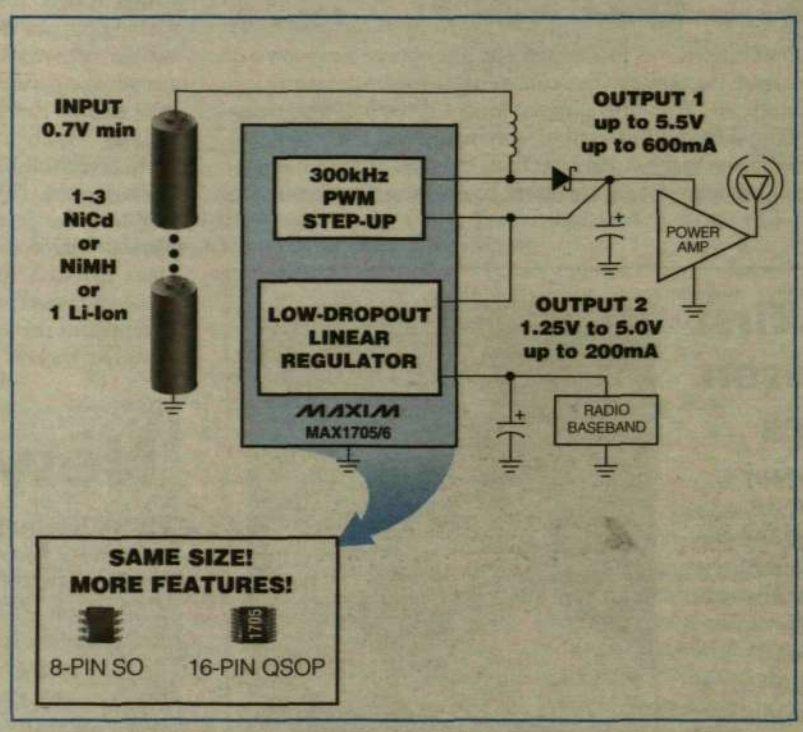
LGH

DUAL-OUTPUT PHONE DC-DC SUPPLIES POWER AMP & LOW-NOISE CIRCUITS

95% Efficient, Low-Noise Step-Up Delivers 800mA from 1–3 Cells

The MAX1705 and MAX1706 combine a high-efficiency, PWM, step-up DC-DC converter with a 200mA linear regulator to generate dual outputs from battery inputs such as one to three NiCd or NiMH cells or one lithium-ion cell. The step-up output drives a phone power amp while the linear regulator provides low-noise power to the rest of the phone. The devices' 300kHz ±14% fixed-frequency switching minimizes interference. Or, use an external clock to synchronize their switching from 200kHz to 400kHz.

- **0.7V to 5.5V Input Range**
- **1.1V Guaranteed Start-Up**
- **Step-Up Output (2.5V to 5.5V adj.)**
- **Linear Regulator Output (1.25V to 5.0V adj.)**
- **1µA Shutdown Current**
- **Pushbutton ON/OFF Control**
- **MAX1705 EV Kit Speeds Designs**



The combination of a high-efficiency, step-up DC-DC converter and a low-dropout linear regulator provides high power for the transmitter power amplifier and a low-noise supply for wireless handset applications.

Illustration: SUSANNE ENGMAN

The question box – the new helpcenter

As the market for mobile telephony expands, the HelpDesk at Lund and the Customer Care Center in North Carolina are receiving more telephone calls. But, moving with the times, customers are now increasingly dispatching their questions by E-Mail.

The Customer Care Center in North Carolina has been Ericsson Mobile Communication's major question box for telephones and accessories ever since it was set up in 1994. The Center actually has a full-time staff of 30 people answering questions from dealers, local companies and final customers. It gets 1,500 – 2,500 calls a day, which is twice the number received last year.

Three types of queries

The questions fall into three categories – where the various products can be purchased, questions about functions and questions concerning technical problems.

Patrick Shively, who is responsible for the technical service function at the Customer Care Center handles questions of a relatively advanced technical nature and assists his colleagues when relatively complex queries are received.

"At the Center, we get immediate feedback concerning an ongoing technical problem with a product. We can fix the problem rapidly by passing this information on to the relevant part of the organization," Patrick Shively says.

All over the world

The HelpDesk in Lund, which only has three employees, is a much smaller service unit, receiving 50 calls a day from local companies in Europe, Africa and the Middle East, and also from service representatives and dealers in Sweden. The Customer Care Center in Linköping deals with questions from end- users.

Around 80 percent of the questions received are about how to operate telephones and accessories – often questions covered in the manual.

The idea is that the HelpDesk in Lund should provide secondary-level backup. Local companies should handle the questions in the first instance, and the questions they cannot deal with should then be passed on to the HelpDesk.

We are in the process of improving the local company support function by providing training," Mikael Andersson says. Mikael is in charge of operations in Lund.

Continuous training

All the support staff in Lund and South Carolina have to attend a product and technical functions training program lasting several weeks. Staff members who deal with complex technical questions receive continuously updated training.

Mikael Andersson also believe that the support function measures the state of the market.

"We notice an upturn when a new product is launched, for example."

All the queries received are stored in a database, and monthly reports are then sent to the departments concerned, for possible follow-up action.

Both support units have had Web pages for the past year, on which questions by E-Mail can be answered, in line with customer requirements.

Via E-Mail

In Lund, Sara Granstedt answers questions from Europe, Africa and the Middle East received by E-Mail. She normally receives about 100 messages a week, mostly from end-users in Sweden, the U.K. and Germany.

"One fellow said that he wanted to buy 100,000 telephones for export to China," Sarah Granstedt recounts.

One or two good ideas are picked up as the result of patent applications, and there are plenty of different opinions and proposals for modifications. The company also receives a great deal of praise.

Jamie Terry, Sara's counterpart in the U.S., has noted a sharp increase in the number of messages received. She gets 50–60 messages a day – twice as many as in March last year.

"Ericsson is meeting new needs, and many customers would rather write than call," Jamie Terry says.

How to connect up

Queries are received from all the locations in which AMPS, D-AMPS And PCS telephones are used. This includes the U.S., Israel, South America and Canada. Questions about systems are the most frequent category. Queries about the way in which telephones can be connected to lap-top computers are also common.

Jamie Terry believes that some of these questions could be eliminated if the Web page contained a little more information.

"Customers like the new Web design – it is more hospitable now. Many people are also impressed by the fact that we can reply within 24 hours." There are also one or two tall stories, for example the case of the man in China who offered to testify to the durability of Ericsson products. His CA 318 phone was run over by a car, but worked perfectly afterwards, suffering only superficial scratches.

Sara Granstedt has also received virtual flowers on the Web from a grateful Spaniard, thanking her for sending a manual in his native language.

GISELA ZEIME

diary

A week goes by so fast

This summer, Sandra Widh is working at the Information Department at Ericsson Components in Kista inStockholm, where she is writing reports and articles for NewsWeb, the company's new Web publication. Sandra comes directly from the University of Stockholm where she has been studying business administration, media and communications, and public relations.

This summer, Sandra Widh is working at the Information Department at Ericsson Components in Kista.
Photo: ANDERS ANJOU

Sunday While visiting furnishing stores, I suddenly decide to repaint my living room. I can envisage the light-green shade which is going to replace the old white paint. I immediately rush over to a paint store which is open on Sundays. Find the right color immediately and buy it. Great! Full of inspiration and high spirits, I go home and start to paint. As the paint roller starts to cover the walls, my smile fades. The color recalls a mixture of Vick's throat tablets and a hospital operating theater. How could I have made such a bad choice?

Monday First day back at work after my vacation. I have to admit that I am no longer accustomed to getting up so early, although it's good to be back again. As soon as I get home, I rush into the paint store again and now I select a new shade more discriminatingly, which I think will be more appropriate. Supper consists of small dishes served by a local Mexican-style restaurant.

Tuesday Write the introduction for a TV interview with one of our division managers. Unfortunately, technical problems occur when I want to publish the text on NewsWeb, and a good proportion of the afternoon is spent solving them. Scan in some pictures from a senior-citizens' gathering which took place before my vacation. The guests seem to think it was really fun to meet each other! I am impressed by how well these reunions work and how many people attend. After work, I buy the new paint and try again. Much better this time.

Wednesday Book an interview for "Featured employee of the week" which, in this case involves a personal interview with Anna Boredahl at Power-supply Module Production. I don't have to walk very far, but on the way I get lost in the subterranean passages linking the various buildings. Yngve Thulin, who takes care of visitors to the plant, comes to my assistance and guides me to the right exit. The interview goes smoothly, and afterwards I hurry back to write up the text and fax it over to Anna. In the evening, I finish painting the room, and then go for a run to get in form for the Lidingö race in the autumn.

Thursday Start the day with an interview with Hans-Ove Andersson and Jonas Grönwall at the Printing Company, where they produce thick-film printed circuits. The operation is now run as a separate profit center, a company within the company. On the way over, I discover that my tape recorder batteries are dead, but I have new ones in my pocket and feel proud of my foresight. During the interview, we talk about the advantages and disadvantages of the restructuring of printing operations, and the practical consequences. This is a fruitful discussion and provides some valuable information. I am astonished that so many people have worked for so many years at Ericsson, and note that 15-20 years with the company is not an unusual time horizon. I wonder what I will be doing in 15 years' time? In the afternoon, Christer Karlsson, the Human Resources Manager drops in and we continue work on the recruitment advertisement which we are developing. This is fun! Superb weather in the evening.

Friday How time passes. Another week has gone by and my brief temporary appointment is coming to a close. I have learnt a great deal at Ericsson, and it has been interesting to put my theoretical knowledge into practice. I am wondering about the future and am pleased that I decided to focus on the information and communications field. Rapid changes and the continuous flow of new ideas suits me.

Please read this.

Your future depends on it. Ericsson's future depends on it. ***The ability to work in and manage projects.***

Sounds dramatic? Maybe, but the truth is that the project way of working is becoming more common and more important for companies to achieve their business and social goals. Especially for those of us working at Ericsson. We are all aware of "2005". And "Wanted Positions 2000". A great deal is expected of us. What contribution can you make as an individual?

Much of Ericsson's strong international position is due to successful projects. Or, to be more accurate, effective project management. Effective project management leads to higher quality. It means that the time between idea and market launch can be speeded up. Radically. In simple terms it means providing the market with the right product at the right time, at the right price and with the right quality. This can only be achieved with short lead-times and high quality in both processes and end-products.

My name is Catarina Meland and I work at Ericsson Infotech. Our role within the Group is to improve the performance of projects. I will explain how later. But first I would like to invite you on a quick helicopter trip. So that you can see project work from above. Don't worry if you're afraid of heights.

Business, business, business and more business.

Project work is all about doing good business. It's about being goal-oriented, focusing on time, sticking to schedules and shortening them. Focusing on business means satisfying customers. However, a project is not an isolated phenomenon. There is always a world outside the project, within the company and beyond it, which must be taken into consideration.

Different companies and organisations are at different levels when it comes to projects. We use the word projectivity to describe the level of maturity that an organisation or company has reached in its ability to manage a project so that its business goals are achieved.

If a project is to succeed, the entire organisation must be fully committed to a project culture in which everyone, including line managers and sponsors, share the same outlook, terminology, etc. Creating a successful project culture usually depends on the use of a well-tested method.

Only then, when everyone is working in the same way towards the same goals, will you meet — and preferably exceed — the expectations of customers and thus gain full credibility for your work.

Is it time we went back to ground level?

The model.

What are your requirements for the model, the base, on which you will build a flat, flexible, borderless, entrepreneurial, project-oriented organisation? You might want to read that sentence one more time. This is where PROPS, Ericsson's corporate project management method, comes in. PROPS is more than a method. It is a comprehensive tool for project work in an international, multi-cultural environment. PROPS can be adapted to all types of project in all types of company or organisation. It covers every aspect of project work, business and social. And it applies just as much to line managers and process owners as it does to project managers, the people involved in projects and, of course, the person who orders the project.

Are you ready to move from idea to action?

"Begin at the beginning, the king said very gravely...

Whatever project method you choose it must be adapted to the special needs of your organisation. Obviously, if you don't inform all your staff at every level, and then don't train them properly in how to use the method, all you can expect is a dose of organised chaos.

Implementing the method is often conducted as an internal improvement project. It covers every stage, from analysis to a final assessment of results. By adopting an overall method for project work you have begun at the beginning and laid the foundations for achieving your final goal.

That's all well and good. But sometimes a little more is required.

...and go on till you come to the end: then stop."

Do you work in the same way throughout your organisation? Or are there differences? To achieve the best results, the method should be adapted to your organisation's processes and way of working. The solution might be an application in which shared criteria for goals and checks are set up.

If you want, we can take over full responsibility for doing the analysis, setting the guidelines, providing the support and producing the documents connected with implementing an application. We will then develop, manage and execute the right training programme.

We can also help analyse your existing system so that you can establish an effective interface between the method and existing routines, what we call an adaptation.

The last two subheading were from *Alice's Adventures in Wonderland*. What comes next?

Pass the ball to us.

When you have started to use the method you will probably need a little help. Don't worry. We are always there when you need support. Our job is to ensure that your projects efficiently work and produce the right results.

Over the years we have built up a unique bank of competence relating to projects. Our project managers have experience and

knowledge of many different types of project – everything from system development to marketing.

Perhaps you need to talk strategy with someone during the planning stage. Perhaps you need practical help during a start-up. Or extra support on a specific project. A mentor or catalyst who can increase general competence levels in project management. Whatever you need, talk to us. We will work together with the people in your organisation. We take care to ensure that our knowledge is put to practical use, both for existing projects and those that will happen in the future.

Haven't got time to be in a hurry.

There are obstacles which can prevent projects being successful. But by focusing on the early stages, by making sure that you don't rush things, you will get things right, right from the start.

For example, project work should begin with identification of all the areas of uncertainty. These areas must then be dealt with effectively. During this initial stage we can provide support in the form of risk analysis. This will help you to assess your chances of success.

We also recommend 7MT, Seven Management Tools, which will help you identify, analyse and assign priority to problems and solutions. We have the capability to assume overall responsibility and act as process manager. Or check the health of a project by performing an audit.

Before I outline our training programme, I must just mention another of our specialities.

Quick access to advanced technology.

If you can combine external competence with your own competence, then you can quickly exploit advanced technology. You will soon be perceived as a comprehensive supplier.

The ETP (External Technology Provisioning) method is Ericsson's corporate method for managing relations with suppliers and partners. We provide support for the method and tools for its implementation. ETP covers all the technical and commercial aspects — from intelligence acquisition and analysis to life-cycle management — that are needed for managing external activities.

(Not long now to the end.)

The learning organisation.

The project way of working is under continuous development. Keeping it up to date and relevant requires skills that are also under continuous development. That's why you should see training as an essential part of the whole picture. As a long term investment. As competence development. Our training programme is designed for both project and line organisations. It covers everything from an introduction to project work and an overview of PROPS, to how you use and develop human skills in your role as project manager. We provide tailor-made solutions in the form of special courses, seminars or other one-off arrangements.

Our training is based on learning by doing. We see our job as making it easier for you to learn, not doing the learning for you. Last year we trained 5,000 people from all over the world. A recent survey of our activities revealed that over 80% of participants see the benefit of their new knowledge in their everyday work. Our instructors spend most of their time working as consultants, which means that they can provide practical knowledge and experience from the projects they have been involved in. Equally, the things they themselves learn while acting as instructors are put to use in their own projects. That's what we mean by the learning organisation.

Contact us and we'll be happy to tell you more.

Ericsson Infotech. Remember the name.

An international competence centre for project management. That's how people see us, and how we want to be seen. A centre of knowledge about project management (corporate responsibility for PROPS is just one sign of this). Our job and our goal is to increase Ericsson's productivity, quality and profitability through better project management. The Ericsson Group stands on the threshold of a new epoch. A new millennium in which the project method will be one of the strategic cornerstones.

Thank you for lending me a few minutes of your valuable time. I bid you a warm welcome into the future.

Catarina Meland

Catarina Meland
Manager, Ericsson Project Management Institute

Ericsson Infotech AB
Box 1038, S-651 15 Karlstad, Sweden
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ERICSSON

vacancies AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation. They are published in the electronic News system, which is being updated once a week.
For further information about advertising here, send a memo to LME.LMEJOB.

Contact no. 11 1997 **Updated August 11**

Ericsson Systems Expertise Ltd, Ireland

EEI/S division is based in Athlone, Ireland. Our main business area is Network Element Management. We employ c. 300 engineers in system management, design, verification and integration. We are currently building our organisation to handle significant additional responsibilities in order to operate as a successful Product Unit.

Opportunities for a Senior Manager in Product Management and for Product Management Engineers exist immediately.

MANAGER PRODUCT MANAGEMENT

● This Senior Management role involves taking global Product Management responsibility for Network Element Management and is part of the General Management team, taking responsibility for the overall results of our R&D Centre.

This is a strategically important position and entails setting up Business Intelligence/Competitor Analysis functions, together with building and maintaining a global network of business and customer contacts.

The Product Management Unit will comprise of 10-15 very experienced Product Management engineers with the prime focus of meeting customers, understanding their requirements and offering solutions.

You have demonstrated Technical Marketing competence in either the Telecommunications of IT/Data arenas. You are highly motivated, innovative and capable of leading a team of highly experienced professionals. You enjoy travel, meeting customers and are capable of understanding how a customer base in 130 countries world-wide can be satisfied.

PRODUCT MANAGEMENT ENGINEERS

● As a Product Management engineer, with systems experience in either the Telecommunications or IT/Data arenas, you will be expected to: Take responsibility for selected customers and market segments. Contibute to overall competition analysis and business intelligence. Facilitate the identification of customer requirements and identify solutions, complementing the existing product portfolio. Liaise with customers, at customer premises, throughout the world and make customer presentations within the broad telecommunications network.

You have a technical qualification preferably in electronic engineering or computer science, with strong interest / experience in Telecommunications or IT/Data networks. You have an outgoing personality with natural drive, self-motivation and are a proven problem-solver.

Contact/Application not later than 970822: Michael McGann, Personnel and Competence Services Manager, Ericsson Systems Expertise Ltd., Cornamaddy, ATHLONE. Phone No. +353 902 31258 or email:eeimmgÖeei.Ericsson.se

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Ericsson Eurolab Deutschland Gmbh, Herzogenrath, Aachen

The EED/X/P department is part of the PAX system house and a typical design centre within the GSM development area of the Ericsson family. The GSM development is targeted towards the European and American systems with close coordination to a number of design centres worldwide. Our design groups are responsible for developing our products according to RMOG's methodology, enhancing them by locally developed processes. The PAX design department in EED is looking for a

FUNCTION TEST LEADER CME 20 SS R8 MSS

● You will be responsible for FT for the CME20 SS R8 subproject for MSS starting beginning of 1998. The general responsibility of the FT leader is to plan, control and report FT activities of the FT subproject.

FT on target machine as well as FT in simulated environment (SFT) has to be supported whereas the main focus will be on FT in simulated environment (SFT).

The main authorities and tasks are: Take part in the establishment of the function test team. Plan, control and report FT activities of the subproject. Initiation of reviews and technical approval of the FT TSs and TIs. Selection of test environment (simulated or target). Performance of entry and exit criteria checks. Be contact person for technical questions within the FT area.

As a suitable candidate, you are an Ericsson employee and should have a strong knowledge in function test, preferably in simulated environment (SFT) in the area of MSS. Experience in working in projects is a prerequisite.

Any managerial experience (e.g. as test leader, team leader or project manager) or design experience in the MSS area is a clear advantage. Initiative, good communication and cooperation skills as well as working under pressure are important personal qualities. Furthermore, you should have an open minded and flexible attitude and show the ability to work in an international team environment.

Contact not later than 970919: Human Resources Dorte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or PAX Design Sabine Bühmer, Memo: EED.EEDSAS, Dial: +49 2407 575 234

The EED/X/SO section within our PAX system house is responsible for Product Line Configuraition Management for CME20 Switching Systems. We provide test configuration management for CME20 design projects from feasibility through GA. Additionally, the section is responsible for support of testing in the simulated environment for CME20 test and design maintenance activities. To support our actvities we are looking for a Project Manager

CME20 SS R8 TEST CONFIGURATION MANAGEMENT (TCM) - FUNCTION TEST

● We are presently seeking a qualified candidate to assume the project management role for CME20 SS R8 TCM (FT). You will work within the Product Line Configuration Management Section - a motivated and experienced section comprised of 30 people responsible for all activities required to execute TCM projects.

The TCM orgainzation is responsible for integration of products designed within three related design projects executed by the AMC, PAX and PA-SC organizations. The main tasks are the planning, execution and control of TCM activities in accordance with existing EED and AMC/CME20 SS project directives from a very early stage (pre- TG2) until MS8.

As a suitable candidate you are an Ericsson employee with AXE competence in the area of AXE design, testing or TCM. Previous experience in project or line management and experience in one or more activities within TCM is desirable. These areas include program production, AS specification, parameter administration, library specification, data transcript, dump assembly and MHO administration.

In this position you will need strong organization, planning, coordination and communication skills. You will have to be flexible and have the ability to work under time pressure.

Contact not later than 970905: Human Resources Dlrte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or Section Manager EED/X/SOC Charles D. Grinstead,EED.EEDCGR, Dial: +49 2407 575 341

The EED/X/SL section within our PAX system house is responsible for worldwide Maintenance and Customer Support of released CME20 Switching Systems. We provide support for the CME20 Switching Systems after "General Availability" has been set. The section also has the responsibility to assemble, and test packages that compliment the main Product Line Releases (e.g. Correction, GIWU, and HIW Packages). To strengthen our further activities we are looking for

EXPERIENCED FIREFIGHTERS, TROUBLESHOOTERS, SUPPORT ENGINEERS & TESTERS

● We are key players in the new CME20 support structure. Join our international teams, come and work in a demanding environment with the latest functions on the fastest growing AXE application. We have a number of vacancies in various areas of our responsibility. We are looking for experienced personnel (3-10 years) who can participate in:

FOA Firefighting. Application System Replacement development. Hot TR Troubleshooting. Package production. Emergency correction production. Correction testing. Technical consultancy. AC-A testing. Global support co-ordination. CN-A testing. Function testing. Deskchecking.

Come and develop your skills further here with us. We are regarded as the primary competence centre for CME20 HLR/MSC support. We work closely with all worldwide CME20 support organizations, with the most demanding operators at network/system/function level. We tackle the high impact problems that affect the worldwide Switching System. We work closely with Design organizations to fix faults and test and implement new functions.

Opportunities for personal and technical development are outstanding, also are the opportunities for worldwide contact networking. Watch yourself make a global impact with your efforts. Get more info on us from our homepage: http://www.eed.ericsson.se/services/eed-x-sl/

Applicants should be educated to degree level or equivalent and should demonstrate a solid AXE background and a determination to tackle problems and meet new challenges. An open minded and flexible attitude and the ability to work well in a team environment are important personal qualities. As a support engineer you should also show good written and verbal communications skills.

Contact not later than 970905: Human Resources Dlrte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or Section Manager EED/X/SLC Peter Lopez Memo: EED.EEDPELO, Dial +49 2407 575 201

The Axe Mobile Core (AMC) organization develops the platform for all Ericsson digital mobile systems. We are responsible for management, control and coordination of products and projects that concerns development and maintenance of the AXE Mobile Core. It is our mission to provide our customers with competitive and profitable multi applications AXE Mobile Core system able to support a number of current and future telecommunication applications. We are looking for a

PROCESS ENGINEER

● The main responsibility is the improvement of the work processes in EED/U and AMC according to the TQM plan at EED/U. The position reports to EED/U/QC.

The main tasks are: Support the AMC Process Manager. Coordination of process management (PM) activities, such as maintenance and improvements of processes. Supporting and being the driving force on process management methods. Support the organization with specific knowledge within the current work area.

As a suitable candidate, you have a very good knowledge in how to maintain and improve processes. You should be familiar with the Ericsson-way-of-working and the existing processes in your current work area. Knowledge of different methodologies used in software engineering is a definite plus. Since you work as a moderator and consultant we require a structured way of thinking, good communication skills, perseverance and the ability to be the driving force behind PM. Overall you should see this job as a challenge in improving our existing way of working.

Contact not later than 970905: Human Resources Dlrte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or Methods and Quality Management AMC Andreas Bleeke Memo: EED.EEDANB, Dial +49 2407 575 394

The AMC project office has a dynamic group of overall project managers and administrators managing key project at the core of all mobile applications. These projects encompass subprojects and associated projects in Holland, USA, Ireland, Finland, Sweden, Norway, England, Spain, Italy, Germany and Greece covering a vast range of development areas at the leading edge of technology.

Due to the need for new challenging projects in the AXE Mobile Core we are looking for an

AMC MAINTENANCE PROJECT MANAGER, "AMC Maintenance and CNIs"

● You will lead the AMC Maintenance project with full responsibility for fulfillment of Ericsson commitments to our worldwide customers in close cooperation with other Ericsson subsidiaries.

The position reports directly to Imo Freese, Manager of the AMC Project Office.

Furthermore, good knowledge of PROPS, MHS and management methods is a prerequisite. Additional good knowledge of mobile telephone systems and Ericsson business practices would be an advantage.

Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is essential.

Furthermore you should have strong interest in people and be willing to develop as a leader. The department and Human Resources will give support for your implementation and start in the new position.

Within the same area we have an open vacany for a

AMC PROJECT MANAGER, "AMC Feasibility and Development"

● Your will lead a large AMC project with full responsibility for fulfillment of Ericssons commitments to our worldwide customers in close cooperation with other Ericsson subsidaries. The position reports directly to Imo Freese, Manager of the AMC Project Office.

As suitable candidate you should have a Bachelor of Engineering degree with specialisation in telecommunications, or equivalent. A minimum of four years work experience in technical aspects of telecommunication as well as relevant and proven experience in project management are prime conditions. Good knowledge of PROPS, project planning, budgeting and management methods therefore is an absolutely must. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage.

Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is essential. Furthermore you should have strong interest in people and be willing to develop as a leader. The department and Human Resources will give support for your implementation and start in the new position.

Contact: Human Resources Doerte Kaulard, Memo: EED.EEDDKA, Dial:+49-2407-575-163 or AMC Project Office Imo Freese, Memo: EED.EEDIWF, Dial:+49-2407-575-469

Ericsson Inc, US

CMS40 STANDARDIZATION ENGINEER

● We are currently seeking motivated engineers to create the standards for our GSM based PCS1900 system. You will be responsible to represent Ericsson at the various standards bodies, using your expertise to shape the future of wireless communications.

The successful applicant will possess a BS/MS in CS/EE with 5+ years of telecommunications experience. Excellent written & verbal communication skills are required, along with a willingness to travel. GSM/Mobile experience is a plus.

Contact: David Boltz (EUS.EUSDLBO (972) 583-5927) or Patrik Ringqvist (EUS.EUSPLR (972) 583-7015).

CMS40 SYSTEMS ENGINEER

● This position is responsible for systems management tasks in the digital switching systems and applications area.

Qualified candidates will perform systems investigations, requirements analysis, network architecture and technical coordination for our CMS40 & CME20 system. BS/MS in CS/EE with 6+ years telecommunications experience is required. Excellent written and verbal communication skills are required. Datacom and/or mobile experience is a plus.

Contact: David Boltz (EUS.EUSDLBO (972) 583-5927) or Patrik Ringqvist (EUS.EUSPLR (972) 583-7015).

INTELLIGENCE NETWORKING (IN) SERVICE DESIGNER

● We are seeking experienced engineers to design services using the IN 2.2 platform for GSM and PCS 1900 mobile networks. You will be responsible for design and implementation of IN services as part of a design team as well as participation in pre and feasibility studies. We are responsible for the RMOG Personal Services within DSA applications. We have just completed the Personal Number (PN) service and have started design on the Personal Assistant (PA) service.

Qualified applicants possess a BS/MS in CS/EE with 3-5 years of telecommunications experience, good knowledge of the IN 2.2 (CS1/CS1+) platform and SMAS. Excellent written & verbal communication skills are also required. GSM/Mobile experience and call processing knowledge are a plus.

Contact: Bo Sundstedt (EUS.EUSBOSU (972) 583-7030) or Patrik Ringqvist (EUS.EUSPLR (972) 583-7015).

***Ericsson Business Networks AB, Enterprise* Networks, Nacka Strand**

The unit Product Marketing Management for Multimedia Communications within Enterprise Networks is expanding in the strategic area of IP/LAN based multimedia. We are now looking for

PRODUCT MANAGER FOR MULTIMEDIA END-USER APPLICATIONS

● Our product offering today consists of the Multimedia Workgroup System, that provides high definition desktop video and data conferencing. This prod-

uct provides good input and understanding of the end-users needs for multimedia communication services.

We are now working on the next generation communications system, based on IP (Internet Protocol) which will work on multiple LAN technologies and use a single network for voice, data and video communications. A key element in this new offering will be the convergence of traditional and new end-user services and the related applications to access to them.

The candidate has a degree in engineering (preferably) or economics, few years of technical experience within the field of end-user applications running on PC, and a good understanding of LAN/multimedia/Internet. He/she will be responsible for all product management activities related to the end-user applications to be bundled in the new generation system mentioned above, including contacts with possible partners.

Contact: Giacomo D'Amato (phone 08-42 20648, memoid EBC.EBCGIAD, e-mail giacomo.damato@ebc.ericsson.se) or Niklas Forsén (phone 08-42 20655, memoid EBC.EBCNIF, e-mail niklas.forsen@ebc.ericsson.se). Application: Ericsson Business Networks AB, Elisabet Lindgren, 131 89 STOCKHOLM, memoid EBC.EBCELN.

S.A. Ericsson, France

MD 110 SUPPORT ENGINEER

● ACTIVITY: As a support engineer you will within the customer support organization perform emergency support, trouble shooting and operational support on MD110 and peripherical equipment. You will be working towards external customers, installers as well as Ericsson personnel with the maintenance and installation departments. You will work as the interface towards the ESC in escalation processes.

SKILLS: At least three years MD 110 experience. A good overall knowledge of the system, signalling principles, system functions and peripherical equipments like DNA, CCM and CAM systems. Knowledge of CAS and CCS signalling systems, basically ISDN, Q-sig and R2. Be able to perform and analyse signal tracing, read software documentation (PlexView) and write fault corrections. Knowledge of Eripax is a plus. Fluency in English is required and a good knowledge of France is desired.

Position to be filled in September 1997.

Contact: Jean AUDRAN Customer Service Manager EZF.EZFJAUD or Maryse MAGNIER Human Resources Manager EZF.EZFMMAG

Ericsson Telecommunicacoes S.A. Brazil - EDB

Brazil - Exciting new opportunities in the fastest growing Latin American market.

Ericsson Brazil, EDB, is rapidly expanding its Cellular operations as a result of its leading position in the explosive Brazilian telecommunications market. With more than 22 customers in the D-AMPS/AMPS A-band alone, and new opportunities evolving from the upcoming B-band license process, EDB requires the support of motivated telecommunications professionals. EDB's headquarters is based in Sao Paulo and there are regional sales and support offices across the country.

The general requirement for all positions is fluency in English. Fluency in portuguese and Spanish is preferred. Both short- and long term contracts will be offered. Take the opportunity to apply for the open positions in the following areas:

TECHNICAL SALES SUPPORT & PRODUCT MANAGEMENT

PRODUCT MANAGERS FOR OSS (CMOS) AND WIN

● As Product Manager you are expected to perform activities related to the products i.e, execute actions required to make the product available to the rest of the organization, prepare product market plans, hold presentations both internally and for customers, handle market requirements, answer SOCs and develop strategic partnership with our customers.

You should have a B.Sc. or M.Sc. in Electrical Engineering with a major in Telecommunications and have at least 3 years experience in a similar position. You must be willing to work in a team, be creative and be able to take initiative and risks. You must withstand pressure and have the ability to work under demanding conditions.

EDB/ROM - CUSTOMER SUPPORT

SYSTEM SUPPORT ENGINEER

● As a system support engineer you will provide emergency support (on call), operational support, trouble shooting and software implementation. You should be Electrical or Telecommunication engineer with 5 years experience in AXE. Strong knowledge in CMS88, PLEX, ASA, RBS, IOG11. You should be able to transfer knowledge to local organization (FSC), deal with customers, work and solve complex software problems. It's important that you are proactive and take initiative without supervision.

SYSTEM ENGINEER (MSC) FOR NETWORK OPERATION & MAINTENANCE

● As a systems support engineer you operate and maintain MSC's, keep track and execute schedule routines. Other tasks are customer care support, network surveillance, dispatch and co-ordination. You should have a technical education in telecommunication, information technology, electronics or equivalent, 2 to 3 years experience with IT or telecommunication, documented experience in radio communication, experience within maintenance of telecommunication or computer system, good knowledge of general telecommunication and mobile telephone systems especially within installation and NO&M. Experience within Network Operation & Maintenace may replace the formal education requirement.

SYSTEM ENGINEER (RBS) FOR NETWORK OPERATION & MAINTENANCE

● You will work with Operation and Maintenance (preventive and corrective) of RBS, keep track and execute scheduled routines. You should have a technical education in telecommunication information technology, electronics or equivalent, 2 to 3 years experience with IT or telecommunication. Documented experience in Radio communication. Experience within maintenance of telecommunication or computer system. Good knowledge of general telecommunication and Mobile telephone systems especially within installation and NO&M. Experience within Network Operation & Maintenace may replace the formal education requirement.

SYSTEM SUPPORT ENGINEER FOR CUSTOMER SUPPORT & IMPLEMENTATION (CMOS/OSS/SMAS)

● As a system support engineer you will develop procedures in field support, investigate and solve complex problems both hardware and software. Provide expert technical support to Ericsson's customers and transfer knowledge within the OSS Field Support Center. You should have a degree in Electrical Engineering/Telecommunication or equivalent. A minimum of 5 years working in telecommunications/computer industry. Minimum 3 years experience working with Ericsson. Customer Support for CMOS/TMOS/SMAS. Good knowledge of CMS88, data communication protocols and some knowledge in cell planning statistics.

EDB/ROP - RF ENGINEERING & RF OPTIMIZING

RF ENGINEERS, RADIO NETWORK PLANNING

● You will work with radio network planning of Ericsson´s CMS88 system, both 800 and 1900 MHz bands. This will include traffic and coverage dimensioning, frequency planning, coverage and interference predicting with Ericsson Engineering Tools. The radio network planning will be addressing both new systems and expansions in existing systems, as well as digital migration planning.

RADIO NETWORK OPTIMIZATION

● You will work with radio network optimization of Ericsson´s CMS88 system, both 800 and 1900 MHz bands. This will include analysis of the system's performance through switch statistical data, analysis of the cell plan, drive testing, data post-processing and analysis, search of non-optimized parts, suggestions of improvements and implementation.

We see the unit as a whole and expect to work as a team of dedicated but flexible resources, that will enhance and promote communication and exchanges between the groups. You are therefore specialized in one of the fields mentioned.

For both of the positions mentioned above we require at least 3 years experience, in either Cellplanning or Tuning/Optimizing of Cellular systems (preferably D-AMPS/AMPS). You have a B.Sc. or M.Sc. in Electrical Engineering, Telecommunications or equivalent. A broad international experience is an asset.

EDB/RI - IMPLEMENTATION SYSTEM

SWITCH TEST ENGINEERS

● A switch test engineer provides high-quality testing of AXE switch equipment to include integrating mobile cell sites to the switch background performing data transcription implementation. You should have two years experience of testing AXE hardware/software, ability to travel extensively and have knowledge of D-AMPS/IS 136 technology.

RBS TEST ENGINEER

● You shall be able to test and commission radio base stations. This includes performing system/acceptance testing of digital interfaces, microwave and auxiliary Systems. You shall also be able to use TEMS for coverage and hand off verification. You should have one year of experience in RBS 884 testing, an ability to travel, valid driver´s license and knowledge of D-AMPS/IS 136 Technology.

TRANSMISSION ENGINEER

● As a transmission engineer you plan, implement and supervise the installation and test of all types of transmission equipment, e.g. Mini-link, HDSL, cross-connection SDH and etc. You shall also be able to test the Access Network. You should have 3 years experience in transmission equipment and an ability to travel.

SWITCH/RBS INSTALLATION ENGINEER

● As a switch/RBS installation engineer you make plans, implement and supervise the installation of the switch (AXE) and RBS equipment in customer facilities. You must be able to work with quality standards and provide quality control check and progress reports. You must be able to read and understand Ericsson AXE documentation. You should have two years of experience in telecommunication and installation of the AXE and have the ability to travel extensively. A valid Driver´s license required.

DT ENGINEER

● Provide engineering with support of the switch integration and create I-Modules. You should have 3 years experience in DT environment for D-AMPS/AMPS system. Knowledge of DT tool such as PC- Comreg, C3fast, Compose and DTSS. A valid drivers license required.

RBS SITE ENGINEER

● As RBS site engineer you shall be able to perform site investigation, quantify and allocate the indoor and outdoor equipment, interconnection and produce RBS installation manual (C-Module). You should have 3 years experience in D-AMPS/AMPS RBS and/or transmission equipment such as SDH, HDSL, DXC, Mini-Link, etc. Knowledge of Word, Excel and ability to travel. Drivers license mandatory.

SWITCH ENGINEERS (MSC)

● As a switch engineer you do the planning and implementation of switch installation projects, mechanical installation of switching, transmission, power, necessary cable ways, cable manufacturing and produce MSC installation manual (C-Module). You should have 3 years experience in MSC site engineering concerning D-AMPS/AMPS systems. Knowledge of Word, Excel and Please. Driver´s license required.

Contact persons EDB, Brazil: phone +55 11 681-2000 Operations, Eduardo Baptista; - Engineering, Gerson Freitas; - Customer Support, Alexandre Setterval; Implementation System, Luis Bernardo; Technical Sales Support, Renato Fantoni; Human Resources EDB, Jacira Rita F. Gomes. **Contact persons ERA/A,** Stockholm: phone +46 8 7570000 ERA/AH Marianne Molin or Göte Hedblom Application: The mailbox at EDB, Brazil: BRA.EDBEXPA or Ericsson Radio Systems AB KI/ERA/AHS Kerstin Malmgren 164 80 STOCKHOLM

Ericsson Portugal (SEP)

Ericsson Portugal has been very successful to address the mobile telephony market. Ericsson Portugal is a small fast growing local company with approx. 200 employees. The company is located in a suburb to Lisbon. SEP offers interesting and exiting job opportunities on a fast growing market in a refreshing environment. We are now seeking GSM experienced people on short and long term to complement our account teams. Knowledge in Portuguese is an advantage but not a must.

LOCAL PRODUCT MANAGERS

● You will cover the whole Mobile Network Design area or part of it. You have preferably experience from SS, BSS or radio network design.

MARKETING MANAGER

● You will be responsible for daily customer contacts, presenting our products and preparing offers. You have preferably experience from commercial activities or product management.

Contact: Hakan Kastlander +351 1 4249419 SEP.SEPHKAS or Tor Olofsson +351 1 424956 SEP.SEPTOR or Christer Ahlner +46 8 4048407 ERAC.ERACRAR

Ericsson Ltd, UK

PROJECT MANAGER

● Overall management of projects using existing and new processes from offer acceptance through to customer acceptance. Manages sector projects through applications systems management, customer support and order engineering, co-ordinates the contributions of other groups within Ericsson and third parties. The Project Manager supports the development of the business case at sector and/or divisional level.

Technical: Proven understanding of required project processes/models.

Business/Human: Clear understanding of the sector and its objectives in the context of its market, flexible approach to change, customer focus both internal and external, good commercial and financial awareness, ability to influence, good interaction skills within the team, strong problem solving and analytical skills, drive to deliver results, strategic vision.

Ideal background/experience: 3 years project management experience in a a telecoms environment, HND/BSc in a relevant subject, understanding of Excision organisation.

Contact/Application with ref no CN149, CN272: Michael Chance, ETL/N HR Site: Guildford, Surrey, England

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Ericsson Radio Systems AB

SYSTEM DESIGN – WIDEBAND INFRASTRUCTURE

● The Cellular Systems-American Standards Business Unit of Ericsson Radio Systems AB, located in Stockholm, Sweden, is in search of qualified candidates to ramp up our activities in several system design areas.

The System Design organization is responsible for the continued achievement of technical excellence of our system by proactively investigating and promoting technical opportunities originating from internal and external sources for integration into our family of products.

Our activities are aimed at orienting future development and is thus the earliest step in the provisioning process. Thus one of several key activities is to perform advanced system planning for the short and long term evolution of our system.

We have begun the process of incorporating some relatively recent but significant technology impacts to our system. Wideband access and datacom capabilities are clearly important elements in developing our products and standard to meet the needs of wireless subscribers in the near future. We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Wideband Infrastructure.

The objective is to define the technical roadmap in order to achieve wideband data rates on the radio access network. This is to be done by analyzing the prevailing technology options and appropriate limitations.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant mobile telecoms knowledge (5 years+) with some datacom knowledge. Mobile radio network competence would be an asset. Fluency in English is required. A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

SYSTEM DESIGN – DATACOM INFRASTRUCTURE

● We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Datacom Infrastructure.

The objective is to define the system roadmap for the evolution of packet and circuit switched datacom in the network. The evolution of CDPD in relation to future scenarios and the needs of switching and transport for wideband on the radio access need to be incorporated.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant datacom knowledge (5 years+) with some telecom knowledge. Specific competencies in datacom architecture and protocols would be an asset. Fluency in English is required. A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

SYSTEM DESIGN – WIDEBAND/DATACOM SERVICES

● We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Wideband/Datacom Services.

The objective is to investigate concepts such as client/server architecture, electronic commerce and multi-media applications for the purpose of new wireless end-user services taking advantage future of wideband bearer capabilities.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant computer network architecture, or Internet architectural knowledge (5 years+) with some telecom knowledge. Fluency in English is required. A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

Contact: Jan Erik Andersson, phone: +46 8 404 2025, memo era.erajean or Tariq Rahman, phone: +46 8 404 8029, Memo era.eratara, Email Tariq.Rahman(a)era-a.ericsson.se Application: Ericsson Radio Systems AB, AH/H Anette Spångberg, 164 80 Stockholm, Sweden.

Ericsson Expertise Ireland LTD (Dublin) - EEI/R

EEI/R is a fast growing CMM level 3 company. Currently we are seeking staff to fill a number of vacancies in our CME20, CMS30, CMS88 design/verification/maintenance departments.

AXE SW DESIGNERS (RP2, PLEX, C) (CME20,CMS40,CMS30,CMS88)

● We require staff (long term or local contract) to fill the vacancies in the area of CP(apt) , RP ,RPD & RPG design for the above systems.

Job description: The ideal candidate will be an open minded, highly motivated individual who prefers to work in a team. He/she has at least 3 years experience in SW design. This expertise would preferably be from a mobile (BR) background, but non mobile background is indeed very welcome as well. As a designer he/she will be part of a design team being responsible for delivering a quality SW product on time to function test and/or joint test.

AXE SW JOINT, FUNCTION & SYSTEM TESTERS (CME20,CMS40,CMS30,CMS88)

● We require staff (long term or local contract) to fill the vacancies in the area of system test , joint test, function test and maintenance of the above systems.

Job description: The ideal candidate will be an open minded, highly motivated individual with AXE (SW/HW) verification or installation test experience for at least 3 years. This expertise would preferably be from a mobile

(BR) background, but non mobile background is indeed very welcome as well.

As a tester he/she will be part of a function design/test team in an early stage of a design project, to prepare function TS/TIs. These TS/TIs will be executed by him/her later in the project during the joint test and/or function test phases

In maintenance he/she will be part of a expert team analysing and solving Trouble Reports received on the above systems. Besides producing and testing quality AC/SPACs he/she will also perform R.C.A, desk checks ,test CNIs and participate in FOAs

AXE SYSTEM EXPERTS (CME20,CMS40,CMS30,CMS88)

● We require staff (long term or local contract) in our system departments to participate actively in PRE and POST TG2 activities of future products in the above systems

Job description: He/she has a very good overall system view (of at least one of the above systems) has an good knowledge of CP , RP and/ or IOG shall have a proven record of system requirement analysis, preferable mobile, but other systems strongly considered would be expected to consider future system /feature improvements as part of the job. has written RS and IPs Will be able to support design , function test and product maintenance at request Can work alone with little supervision if necessary

Contact: Leo Theunissen, memoid EEI.EEILTN Email: eeiltn@eei.ericsson.se or Anne Marie O'Sulivan, memoid : EEI.EEIAOS Email: eeiaos@eei.ericsson.se Application: Annemarie O'Sulivan, memoid : EEI.EEIAOS Email: eeiaos@eei.ericsson.se

TRANSCODER AREA DEVELOPMENT SPECIALIST

● We require transcoder specialist (long term or local contract) in our system department who will be technical responsible for driving a centralised transcoder solution for CME20, CMS88 and CMS30 systems.

The person appointed will be expected to make a direct contribution to the development and successful operation of the convergence to a single solution of transcoders across the CME20, CMS88 and CMS30 product lines.

Job description: As a specialist you will be able to demonstrate detailed transcoder area knowledge including RP design in addition to developing and maintaining

Contacts with transcoder development groups in Sweden, Finland and Germany.

You will be required to provide detailed system knowledge of AXE as well as good understanding of CME20, CMS88 and/ or CMS30 implementations.

Minimum of 6/7 years relevant experience, where at least 2/3 has been working for Ericsson, preferable the transcoder area

You will be responsible for building up the expertise and to transfer knowledge within the department. You must therefore be able to display excellent communication skills, be innovated and have a strong results orientation

Contact:Owen O'Donnell, memoid EEI.EEIOOD Email: eeiood@eei.ericsson.se or Anne Marie O'Sulivan, memoid : EEI.EEIAOS Email: eeiaos@eei.ericsson.se Application: Anne Marie O'Sulivan, memoid : EEI.EEIAOS Email: eeiaos@eei.ericsson.se

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Beijing Ericsson Comm. Systems Co. Ltd (BEC)-.

...is a joint-venture between Ericsson and BWCP in Beijing. Our operation includes manufacturing of MD110 as well as marketing and sales of network solutions for telecommunication and data. Our business employs 450 persons. Ericsson has the majority of the ownership. We are now looking for:

PRODUCT MARKETING MANAGER

● The work involves development of the existing Marketing and Sales organisation which consists of about 10 persons. Besides from that, you need to increase the speed of introduction to the market and to be responsible for the competence development referring to internal product knowledge.

We look for a person with an academic degree and skills in management. Other qualifications are knowledge about Enterprise Networks product-portfolio as well as fluency in English. We also expect you to enjoy working in the interesting and dynamic culture that China will offer you.

Contact: Owe Wedsjö, memoid EBC.EBCWEDO, tel +46 8 422 0291. Application: Jan Lagerborg, memoid EBC.EBCJGLA, Human Resources, 131 89 Stockholm (NA/EBC/EN/H).

Ericsson Ltd, UK, Customer Networks

PRINCIPAL SUPPORT ENGINEER

● Providing high level expertise and is responsible and accountable for technical decisions and technical support accross all projects and activities. BSS trouble shooter developing good customer relationships, TR analysis and providing 24hr emergency support.

Competency Technical: HNC/Degree, 5 years experience

Business/Human: Understands Ericsson development activities, ability to develop close customer relationship and an understanding of the issues the customer faces, ability to use own initiative in solving problems, strong communication skills, understanding and awareness of current and future complex problems.

Ideal background/experience: Knowledge of Ericsson systems and procedures, willing to work outside normal working hours.

Contact: Michael Chance, ETL/N HR Ref No: CN122 Site: Guildford, Surrey, England

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Ericsson Telecomunicacoes S.A.,Brazil - EDB

PROJECT MANAGER IN BRAZIL

Ericsson (EDB) in Brazil will be responsible for a number of turnkey implementation projects in Brazil with start July — August 97. A typical project comprises installation of 5 MSC´s, HLR's, Access Network, 250-300 RBS's, Site acquisition and Civil work activities including mast and tower erection and site preparation. It is intended to make extensive use of sub-contractors in the project. The Project Manager will be fully responsible for the turnkey implementation of the project.

● The project manager will be responsible for successful execution of assigned projects regarding time, cost, quality, and budget follow up. She/he will also see to that required processes and methods are followed and used.

The project manager will manage and assign resources within the project organization. That could also include selection and management of sub-contractors. Handling negotiations with the customer in close cooperation with the marketing department (Core three concept). Drive commercial aspects of the project such as costs against budget, delivery and logistics.

A successful candidate has a Masters or Bachelors degree in engineering, science or business administration or a lower degree combined with extensive experience from the telecommunication area. The project manager must evidence full experience in fast track projects with international celulars operators as Southwestern Bell, AT&T, Airtouch, Mannesmann, Stet, Telia etc She/he should have experience in management of projects with mixed civil works and technical activities.

A strong leadership and management style is also required. Excellent written and spoken communications skills in English is required. Knowledge of Portuguese or Spanish is desired.

Other assets are a broad knowledge in cellular communications and experience of working in an international environment.

The contract will be for a period of one year and could be extended to 2 years . The project manager must have availability in a short period of time, no longer than End of August.

Contact: Project Management Luiz Carlos Bernardo +55 11 681-1506 or Human Resources Jacira Rita F. Gomes +55 11 681-1867 Application: EDB, Brazil: BRA.EDBEXPA

Ericsson Research & Development (China), Shanghai, China.

SOFTWARE DESIGN ENGINEERS

Ericsson is establishing a Research & Development (R&D) center in P. R. China. The R&D company will focus on development of telecom- and datacom products, both for the Global and the Chinese markets.

The company will be established in Shanghai and aim to be around 100 SW-designers by the end of 1998.

Our task is to work with design and verification of software products for access networks.

● We are now starting recruitment of locally employed SW-designers to join our company. You will be a member of a design team that will design, implement and test the new SW-products.

You have a degree in Master of Science or equivalent. Preferably you also have working-experience with SW from the infocom- or datacom industry. Knowledge of C and/or C++ is an advantage. You should also have a good command of the English language. As we have a high aim for quality you should be familiar with CMM.

Key words about your personality are that you are outgoing, a team player, a self-starter, flexible, goal-oriented and takes pride in sharing knowledge.

If you are willing to take on new responsibilities, face a challenge and develop yourself, this is a very good opportunity.

If you have questions, please visit our homepage at http://pn.ericsson.se/rdc/

Contact: Urban Wiklund, R&D manager Memo id ETC.RDCURW Tel: +86 21 6375 3399 extension 272 or Bo Danielsen, Human Resources, Memo id ETC.RDCBODS Tel: +86 21 6375 3399 extension 267 Application: Bo Danielsen, Human Resources, Memo id ETC.RDCBODS.

Ericsson Inc, USA

AREA BUSINESS MANAGER

● The Area Business Manager has the responsibility for promoting sales in the region by marketing the RPRS product portfolio and services to the LC's and distributors.

The following are examples of tasks for the Area Business Manager: Influence the LC's and distributors to work with the RPRS product portfolio. Support the RPRS certification process by defining and evaluating the LC's and distributors sales training requirements. Conduct sales training with LC's and distributors. Analyze market size and the competitive situation. Coordinate the Core 3 resource requirements between LC's and distributors. Maintain and update regional opportunity pipeline. Be responsible for established budget concerning Orders, Sales, Cashflow, ROS and Customer Satisfaction.

PRODUCT MANAGER (per System Products)

● The Product Manager has the overall responsibility to ensure that the region has a competitive range of products in line with the regions business concept. She or he is also responsible for giving and rendering technical sales support to LC's and distributors in the region.

The following are examples of tasks for the Product Manager: Support the RPRS certification process by defining and evaluating the Local Company's and distributors product training requirements. Conduct product training with Local Company's and distributors. Give advice in technical matters and defining technical specifications. Participate in presentations and demonstrations of RPRS products and persuade about their superiority. Support technically in customer meetings and negotiations. Maintain up-to-date Ericsson and competitor product knowledge.

Location: Kuala Lumpur, Malaysia

Contact: Al Kee, phone 804 592 3868 or Mike Stanley, phone 804 592 7876 Application: Ericsson Inc., Al Kee or Mike Stanley Mountain View Road, Lynchburg, VA 24502 USA MEMO ID: Al Kee EUS.EUSALKE , Mike Stanley EUS.EUSMLST

Ericsson Systems Expertise Ltd. (EEI/S)

EEI/S division is based in Athlone, Ireland. Our main business area is Network Element Management. We currently employ c. 300 engineers in system management, design, verification and integration. We are currently building our organisation to handle significant additional responsibilities in order to operate as a successful Product Unit.

The following opportunities at senior management level exist immediately.

GENERAL MANAGER FOR PROJECTS (PM)

● 1. Purpose of Role To work with colleagues in the general management team to plan for and achieve the overall results for the Design Centre. To ensure focussed and professional project management in the Division.

2. Responsibilities/Accountabilities: Develop and communicate strategy and objectives. Define and agree goals and objectives for the Development Units. On a regular basis review results of the Development Units. Manage the Productivity, Quality, Time, Cost and Customer Satisfaction dimensions of all project results. Manage and develop professional Project Management (management development, good practices, processes etc.) in the Division. Support Project Managers as coach, mentor, manager, adviser as well as with services through the Projects Office.

3. Requirements: A successful candidate should have: Documented management experience from product development. At least five years management experience, a number of these on senior level. A proven record of initiating change and improvements. Willingness to contribute, to the design and implementation of innovative organisational solutions in the business environment of today.

4. Reporting The position will report to the Manager for PU-NEM.

GENERAL MANAGER FOR COMPETENCE (CM).

● 1. Purpose of Role: To work with collegues in the general management team to plan for and achieve the overall results for the Design Centre. To ensure focussed and professional competence management in the Division.

2. Responsibilities / Accountabilities: Develop and communicate strategy and objectives. Define and agree goals and objectives for the Development Units. On a regular basis review results of the Development Units. Manage activities related to recruitment, task assignment, performance appraisal, competence development for all staff. Manage and develop professional Competence Management (management development, good practices, processes etc.) in the Division. Support Competence Managers as coach, mentor, manager and adviser.

Support the operations of the divisions through the services of the following offices: 1. Process Office. 2. Personnel and Competence Services.

3. Requirements A successful candidate should have:- Management experience from product development. At least five years management experience, a number of these at senior level. A proven record of initiating change and improvements. Willingness to contribute, to the design and implementation of innovative organisational solutions in the business environment of today.

4. Reporting The position will report to the Manager for PU-NEM.

Application: via memo Product Unit Manager, Austin Hanley (EEIAHAY).

Ericsson Australia PTY, T/N ASAC TEAM, Carlton Office

TWO IN SYSTEMS ENGINEERS

ASAC (Advances Services Application Centre) is a growing business area that has recently become one of the Ericsson Groups 7 Global Network Intelligence Design Centres. In addition ASAC is well on the way to achieving one of its principle objectives of becoming a regional Network Intelligence competence centre with growing business in Australian and Asian markets.

● The IN system engineers's key responsibilities are: work with customers & markeging to develop service requirements, lead perstudies, investigations & development of protoypes, generate service/application proposals & represent them, act as technical coordinator for major developments, answer general technical queries from customers and marketing, represent ASAC in technical discussions with Customers, perform all levels of design work as required, mentoring more junior staff.

To do this, the IN system engineer must have the following: excellent understanding of the capabilities, Limitations & implementation of Intelligent Networks, in particular of SMAS and the Ericsson SCF, SDF, SSF & Associated IP's. extensive experience with IN Script design, excellent understanding of Telecommunication networks in general and AXE networks in particular. This includes wide experience with an understanding of all network considerations with rolling our IN services such as charging, signalling, O & M and capacity. wide exposure to general AXE design and test, in particular an understanding of alternative service implementations to IN, good understanding of Information Technologies in general and UNIX, Internet and databases in particular. excellent communication skills, both written and verbal, considerable experience dealing with end-customers, a flexible and creative approach.

Experience with the following areas would also be useful: Object Oriented Design, data communications, the Australian Telecoms network, GSM/AMPS Mobile system, Business Com systems.

Contact/Application: Scott Arbuthot at EPA. (ERICSSON AUSTRALIA) Memo Id. EPA.EPASAR

Ericsson Ltd, New Public Networks Stoke Mill, Guildford

NETWORK SUPPORT SYSTEMS ENGINEER

● Reporting to Network Engineering and Product Management Manager, the team works closely together and with the customer to ensure customer satisfaction and exceed customer expectations for all network engineering matters. The team shall also support the AT&T Sales & Marketing team in their objectives by supplying timely and reliable engineering proposals and answers to technical queries in a controlled and quality manner.

The postholder will have an indepth knowledge of Network Management Systems and will work with other off-line systems, including XMATE, SMAS and BIP.

They also have responsibility for agreement of all of the off-line processing and management system equipment specifications and functions with the customer.

Contact: Ref CN218, Paul Norris

NETWORK SERVICES ENGINEER

● The postholder will have an indepth knowledge of ISDN services, analogue services, IN services and Business Communications services, and an appreciation of related signalling systems and charging matters as related to the provision of services.

They will also have responsibility for unerstanding the way in which the customer uses the network services provided by Ericsson, and agreeing the developments necessary to achieve the customer's ambitions for new services and service variations in the future.

Contact: Ref: CN219, Paul Norris

SIGNALLING SYSTEMS ENGINEER

● The postholder will have an indepth knowledge of signalling systems and the mechanisms for mapping between signalling systems in AXE 10.

They will also have responsibility for agreement of all of the signalling interfaces in the customer's current and future network with the customer.

Contact. Ref: CN220, Paul Norris

NETWORK ARCHITECTURE ENGINEER

● The postholder will have indepth knowledge of the AXE 10 switching system and an appreciation of the impact of network services and signalling requirements placed upon the system in a network context.

They are also responsible for agreement of current and future network plans with the customer.

Contact: Ref: CN221, Paul Norris

SENIOR ACCOUNT EXECUTIVE

● An account manager is required by NPN to front the commercial activities with a major international

telecomms operator. This operator is building a global Intelligent Network, with a hub in London.

You will be responsible for working with the customer during the initial roll-out of the network and for developing the long-term relationship with the customer.

The role will involve extensive liaison with the Global Account team which will be distributed between the US, UKm Sweden and Japan.

Experience of working with Japanese businesses would be an advantage.

Contact: Ref: CN260, John Parr

Ericsson Eurolab Deutschland GmbH, Herzogenrath, Aachen

The System House "Product Area Switching (PAX)" (EED/X) is responsible for the profitable development of standard products providing physical transport of voice and/or data communication between a GSM/DCS/PCS radio network (BSS) and an access point in a public or private network.

The department EED/X/T of the PAX System House is responsible for design management and support functions for the Mobile Switching Centre development, including the main areas of project management and support functions (administration, quality, methods, configuration management). The department is a part of the node organization and has the responsibility for PAX product provisioning. To reinforce our team, we are looking for a

GROUP MANAGER EED/X/TMC

● The main authorities and tasks are: Leadership Perform appraisals, participate in recruitment process and intro introduce new personnel. Competence development of the staff accoording to PAX & EED rules & regulations.

PAX: Responsibility for strategic and long term improvement plans for product provisioning. Interface towards BR improvement fora and initiatives, as well as other Ericsson organizations.

General: Preparation of buffer plan. Budget proposal.

This position reports directly to the department manager, EED/X/TC and will be a member of the X/T management team responsible for the operations of the department.

As a suitable candidate, you are an Ericsson employee with managerial experience and should have at least three years AXE-10 software design and process experience.

Furthermore you should have a strong interest in people and show good cooperation and communication skills. Being initiative and a good ability to work under pressure is also a prerequisite.

If you have questions and/or are interested, please refer to your colleagues until August 8th 1997: Human Resources Doerte Kaulard Memo-id:EED.EEDDKA, Dial:+49-(0)2407-575-163 or Manager Design Management and Support Johnny Aarle Memo-id: EED.EEDJOAR, Dial:+49-(0)2407-575481

The AMC project office has a dynamic group of overall project managers and administrators managing key project at the core of all mobile applications. These projects encompase subprojects and associated projects in Holland, USA, Ireland, Finland, Sweden, Norway, England, Spain, Italy, Germany and Greece covering a vast range of development areas at the leading edge of technology.

Due to the need for new challenging projects in the AXE Mobile Core we are looking for an

AMC PROJECT MANAGER

"AMC Feasibility and Development"

● Your will lead a large AMC project with full responsibility for fulfillment of Ericssons commitments to our worldwide customers in close cooperation with other Ericsson subsidaries. The position reports directly to Imo Freese, Manager of the AMC Project Office As suitable candidate you should have a Bachelor of Engineering degree with specialisation in telecommunications, or equivalent. A minimum of four years work experience in technical aspects of telecommunication as well as relevant and proven experience in project management are prime conditions. Good knowledge of PROPS, project planning, budgeting and management methods therefore is an absolutely must. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is a must.

Furthermore you should have strong interest in people and be willing to develop as a leader. The department and Human Resources will give support for your implementation and start in the new position.

Contact: Human Resources Doerte Kaulard, Memo: EED.EEDDKA, +49-(0)2407-575-163 AMC Project office Imo Freese, Memo:EED.EEDIWF, +49-(0)2407-575-469

● The system group within X/P PAX design department has the product responsibility for the mobile application 1/APT 210 25 and the subsystem MSS within the CME20 / CME40 switching system. We also run the product committees for theses products, PC-1/APT and MSS, and perform system studies. For further support of our system group we are looking for a

SYSTEM DESIGNER

● As a System Designer your main tasks include: Participation in prestudy, feasibility- and quickstudies. PRIM & CNI handling. Writing of technical reports.

As a suitable candidate you are an Ericsson employee with at least three years of design experience in the area of switching systems. Furthermore you should be familiar with 1/APT mobile applications. Good knowledge of mobile telephone systems and in Data communications is a clear advantage.

Being initiative, self-driven and showing good analytic abilities as well as good communication and cooperation skills are important personal qualities. In addition you should also be able to cope with a high work pressure.

Contact: Human Resources Doerte Kaulard, Memo: EED.EEDDKA, +49-(0)2407-575-163 Systems Group Frank Plettenberg Memo:EED.EEDFRP+49-(0)2407-575-253

Within the PAX organization the department EED/X/Y is responsible for controlling and coordinating DSA AXE10 based SW Supply and SWsupport activities and to constantly improve these activities in terms of cost efficiency, quality and lead time.

MAS PROJECT MANAGER

● The MAS project manager is mainly responsible for system improvements in the area of Market Application System (MAS) supply and of MAS projects. He is authorized to act in accordance with approved plans, budgets and applicable policies and regulations.

His main activities are: Ordering, coordinate and follow-up the MAS projects. Coordinate activities (early deliveries) with INDUS project. Issue requirements for system, processes, and tools improvements. Member of assignment board as an author of MAS assignments. Collect important market information. The position reports directly to EED/X/YTC.

As a suitable candidate you should have at least four years of Ericsson experience with good competence in the area of MAS verification projects at ESO and/or INDUS projects. A good overview of the market is also desirable. Previous experience as project or line manager is a clear advantage.

In this position you will need strong organization, planning, coordination and communication skills. You will have to be flexible and have the ability to work under time pressure.

Contact your colleagues until 29.08.1997: Human Resources Doerte Kaulard, Memo:EED.EEDDKA, +49-(0)2407-575-163 Process & Quality Patrick Granlund Memo:EED.EEDPAGD+49-(0)2407-575-641

Within the PAX organization the department EED/X/Y is responsible for controlling and coordinating DSA AXE10 based SW Supply and SW support activities and to constantly improve these activities in terms of cost efficiency, quality and lead time. The X/YO group has the responsibility to control and coordinate the SW support activities and to constantly improve these activities in terms of customer satisfaction and cost efficiency. In the EED/X/YO group we have an open vacancy for

TWO IN SERVICE PROJECT MANAGER

● The main activities are: General: Set up GAS structure. Attendance on CN-I board. Follow-up the entire design project and GAS verification project in order to ensure maintainability of the release and to estimate the maintenance cost. Quality and cost benchmarking between the contractors.

The position reports directly to EED/X/YOC.

As a suitable candidate you should have at least four years of Ericsson experience with good competence in the area of maintenance at ESO's or FSC's and/or product line. Experience in AXE structures and product defintion as well as configuration management are also requested. Previous experience as project manager is a clear advantage.

In this position you will need good planning, organization, communication and cooperation skills. You should have a clear focus on customer satisfaction. You will have to be flexible and have the ability to work under time pressure.

Contact your colleagues until 29.08.1997: Human Resources Doerte Kaulard, Memo:EED.EEDDKA, +49-(0)2407-575-163 Process & Quality Patrick Granlund Memo:EED.EEDPAGD+49-(0)2407-575-641

Within the PAX organization the department EED/X/Y is responsible for controlling and coordinating DSA AXE10 based SW Supply and SW support activities and to constantly improve these activities in terms of cost efficiency, quality and lead time. The X/YO group has the responsibility to control and coordinate the SW support activities and to constantly improve these activities

in terms of customer satisfaction and cost efficiency. In the EED/X/YO group we have an open vacancy for a

PROJECT OFFICE MANAGER

● The main activities are: General: Strategic planning of international operations. Coordinate operations with Customer Service, PAX design maintenance, AMC design maintenance, APZ/IO maintenance, other RMOG Product Units. Set goals and follow-up result. Overall resource management for GAS/MAS maintenance.

Participate and act in EED/X/Y management teams Leadership. Perform appraisals, participate in recruitment and introduce new personnel. Competence development of the staff.

The position reports directly to EED/X/YC.

As a suitable candidate you should have at least five years of Ericsson experience with good competence in the area of verification projects and/or maintenance at ESO's or FSC's or product line. Previous experience as line manager is a clear advantage.

In this position you will need good management skills as well as good communication and cooperation skills. You should have a strong interest in people and a clear focus on customer satisfaction. You will have to be flexible and have the ability to work under time pressure.

Contact your colleagues until 29.08.1997: Human Resources Doerte Kaulard, Memo:EED.EEDDKA, +49-(0)2407-575-163 Process & Quality Patrick Granlund Memo:EED.EEDPAGD+49-(0)2407-575-641

Compañia Ericson S.A.C.I., Argentina, CEA, Buenos Aires

MANAGER CUSTOMER SERVICES – MOBILE NETWORKS

Ericsson has been in Argentina for 75 years. Our Local company has experienced a rapid growth during recent years and have now 350 employees. We are active in the areas of Mobile Networks, Public Networks and Private Networks.

● As a Manager for Customer Services - Mobile Network you are responsible for: Field Support Center for MSC, Radio and Unix. Systems engineering (cell- & RF planning). Training.

You will be reporting to the Vice President Mobile Networks and also part of the management team.

The organization is very young and is growing rapidly, this year there is a need to duplicate to 35 persons. This means your main task will be to lead and develop qualified young engineers. Therefore you need to have a keen and honest interest in guiding and developing competence in young people. Proven record of good ability to lead teams and good social skill are essential.

You need a stable technical platform by several years experience from technical work, development and/or support. Good systems knowledge and ability to create confidence in our customers is also of great importance. You have good ability to adapt to different cultures and work environments.

Contact: Hugo Löjdquist, phone +54 1 319-5664, email: hugo.lojdquist@cea.ericsson.se, memoid: cea.ceahugo Application: Ericsson Radio Systems AB, AH/H Göte Hedblom, 164 80 STOCKHOLM

Ericsson Ltd, UK

PRINCIPAL TECHNICAL SUPPORT ENGINEERS

● Department: Ericsson Support Organisation Site: Guildford

The Principal Technical Support Engineer provides a very high level of expertise and is responsible and accountable for technical decisions in Technical Support across rojects and activities. He/she provides expert technical advice to help identify and address business development opportunities, . The Principal Technical Support Engineer is responsible for coaching, training and developing engineers and for encouraging them to identify and introduce improvements to working processes.

Key responsibilities: Take responsibility for providing a very high level of technical expertise on AXE support. Conduct detailed and exhaustive investigations of highly technical or sensitive issues and document them in comprehensive reports for management. Actively contribute to business development by providing leading edge technical solutions to problems. Foster good relationships with internal and external customers. Work closely with Field/Customer Support Centres and Nodes. Work with customer supply to contribute to the evaluation of prospective projects and identification of potential issues/risks. Make a significant contribution to the technical aspects of tenders for business. Monitor and maintain quality standards in problem resolution. Prepare and make formal presentations to external and internal review meetings regarding existing and future system functions. Undertake the role of team/project leader as required for problems in any AXE related area.

Qualifications, experience and knowledge: Essential¯ HNC or equivalent in telecoms/ computers/electronics¯ At least 6 years' experience in AXE support¯ Willing to work outside normal working hours on occasion Desirable¯ Qualified to degree or equivalent level¯ Member of the IEE

Contact: Refno. CN224, Peter Shiret

Ericsson Ltd, Guildford ESO, UK

PROJECT MANAGER

● To plan and manage SW supply projects within the Guildford ESO. Working with the ESO management team and and the customer project managers, you will be responsible for deliveries to Vodafone, one2one, Cellnet and others. You will have 2-4 years Ericsson experience, preferably in a SW handling environment. A willingness to travel is required.

Contact: Mark Ashworth, ETL.ETLMKAH

LM Ericsson International AB, Vietnam

FSC SUPPORT

● Requirement for one FSC support person, dealing with the fixed net in Vietnam.

KEY RESPONSIBILITIES: Take resposibility for analysing, answering and clearing all trouble reports with detailed information to the customer and other operational units. Investigate and prepare test specification and to verify new features and clearance of upgrades. Attend customer meetings ensuring all issues are handled diplomatically and effectively. Proactively provide technical progress reports of activities carried out.

EXPERIENCE/SKILLS REQUIRED: Knowledge of local and toll exchanges is required(FMP3). Furthermore, knowledge about international (Transgate 2)as well as of GSM cellular is an asset but not required.

QUALIFICATIONS: Have knowledge and be compliant to the customer support process and procedures and fully utilise them. Educated to degree level in appropriate subject, with a minimum of 3 years of support experience.

LOCATION: Vietnam, HCMC, Saigon
STARTING DATE: October 1997

Contact: Mikael Berglund ETX.ETXMLBD Telephone + 46 8 719 01 33 Marketing Manager Vietnam

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Ericsson S.A. Spain

In EME Systems Management of SCM within DSA we work with mobile applications for mobile telephony systems (GSM900, GSM1800, GSM 1900 GSM1900/ID-AMPS, etc.) in the Service Control & Management area. We are looking for new proffessionals in a number of interesting areas. The areas are datacom applications, service management, AXE platform, and Adjunct Processor.

The activities are related to system solutions and investigations, system management, Operative Product Management, network/node characteristics and dimensioning, earlier project participation (scenario studies, pre-prestudies and prestudies) , and others aiming to lead and ensure the evolution and competitiveness of the Ericsson GSM systems (GSM900, GSM1800, GSM1900). Other activities include SPM and market support.

● You will be working with other high competent people with different backgrounds and long experience. Our premises are located in Madrid.

Applicants should have an engineering degree, and 4-5 year experience in telecommunications, preferably in the area of interest. Experience in system-level technical development or testing is preferred. Coordinating or leading skills will be highly valued.

The general abilities include working independently and taking initiative, constructive attitude, communicative, travel disposition, working in team (cooperative), and willing to pass knowledge.

Contact/Application: Gregorio Nu,ez (+34-1-339 2924, emegnfe@madrid.ericsson.se, EME.EMEGNFE).

Ericsson Ltd, UK

ORDER ENGINEER

● Department: New Public Networks - Located at Stoke Mill, Guildford

To provide order engineering services for projects undertaken within NPN from the receipt of the works order through the drawing up of detailed specification for all installation requirements, e.g. floor plans, cabling documents etc... As well as dimensioning and hardware ordering in line with customer requirements.

Contact: Stefan Lindfalk

Ericsson Radio Systems AB, Kista

RADIO NETWORK DESIGN MANAGER, CHILE GSM1900

● We need an experienced Radio Network Designer to our project in Chile, where we will implement and launch a GSM 1900 system during 1997/98 for our customer Entel.

You will have the following responsibilities/tasks plan and execute all necessary Radio Network Design activities. predict necessary RND resources in the different phases of the project. sell our Radio Network Design Services, together with our Marketing people.

The work will be done together with our local GSM Cell Planner in Chile, and our RND staff in Kista.

You will be stationed in Santiago de Chile.

We are looking for you who have a number of years experience of RND on the GSM market. have management experience. have international experience.

English is mandatory and basic Spanish is required.

The contract period is one year, with possibility of extension

Contact: Stig Hemström, phone + 46 8 757 10 70, memoid ERAC.ERASTHE or Per-Olov Kjellvard, phone +46 8 404 45 97, memoid ERAC:ERAKJD Application: Ericsson Radio Systems AB, LJH Solveig Vallentin, 164 80 STOCKHOLM memoid ERAC.ERASOL

Ericsson Limited - UK

NETWORK DESIGN & PERFORMANCE ENGINEER

The Ericsson GSM cellular group in the United Kingdom is looking for highly motivated individuals who are interested in the field of Network Engineering. The department currently supports turnkey applications in the UK but, are looking abroad and expanding their role to include performance analysis of existing customer networks. With Ericsson supplying equipment to almost all of the cellular operators in the UK, customers are turning for support in understanding how they optimally utilise their network. If you are looking for a challenge and enjoy travelling and working with customers please review the qualifications requested below.

● Responsibilities and Activities: Those interested in the position will have the responsibility to support Turnkey activities that include: Switch Capacity Analysis, Voice Trunk Network Design, Signalling Network Design, Border Analysis and Design, Synchronisation Design, and Network Modelling. Engineers will work closely with the customer and other internal organisations to design and develop the activities listed previously. Apart from Turnkey projects, engineers will look exploit opportunities to aid customers by supporting performance reviews or by targeting the use of new technologies or methods to optimise their networks. Engineers will also be responsible for new Ericsson products and software releases to insure that our methods and procedures are in line with the future of communications.

Job Requirements: You must be able to demonstrate that you have worked other Network Engineering type roles with proven customer contact. You should have a thorough understanding of the GSM standards and the inter-working of all nodes that comprise the networks. You should be self motivated and work well with little supervision. Excellent communication skills and problem solving are critical for success in this role. Working knowledge of EXCEL, WORD, Database Applications, and the PC environment. Experience: 3 - 5 years in Network or Switch Engineering positions within the GSM environment. MSc or BSc in the Engineering field.

Contact: Dean Hughes - Manager, Switch Network Design, Tel: + 44 1483 305874 or via Memo ETL.ETLDEHS

Ericsson Ltd, UK

BUSINESS DEVELOPMENT MANAGER

● A creative and lateral thinker, we'll look to you to utilise your technical expertise to create and deliver solutions for the Cable & Wireless World-wide operations, liaising with specialist teams in support of the implementation of telecommunications solutions. In addition to excellent technical knowledge (including Broadband, mobile, switching, signalling and network architectures), you should have a solutions- orientated background, commercial awareness and the ability to develop and maintain excellent client relationships. The crucial requirement, however, is an inquisitive and innovative mind.

The Business Development Manager is responsible for making a direct contribution to the development and successful operation of the department, including involvement in strategy, objectives and improvement processes.

The overall purpose of the role is to develop business strategy and opportunities for both Ericsson and Cable & Wireless Local and International Operations, beginning at a strategic and conceptual level as opposed to working at the sales stage. Working with a team of Business Development Executives, the role holder develops Ericsson business with Cable & Wireless in specified parts of the globe where C&W has business interests and/or potential. In addition, the Business Development Manager ensures increasing levels of customer satisfaction with existing Ericsson products operated by Cable and Wireless in its networks.

Key responsibilities: Ensure effective business control of all team activities, including achievement of cost targets. Ensure work is assigned and underaken effectively in order to meet specification, quality, time and budget objectives. Ensure that Department Manager is kept up to date at all times. Operate the agreed global strategy for Cable & Wireless within Ericsson. Be responsible for a particular product area and liaise/assist other Business Develoment Managers with product knowledge. Be the main interface to Cable & Wireless Business Development Units. Develop and monitor Cable & Wireless global agreements/business both locally and with Cable & Wireless H.Q. Co-ordinate Business Strategies to ensure that Ericsson world wide maintain a professional interface towards Cable & Wireless. Develop joint business opportunity strategies with Cable & Wireless from the concept stage. Develop Cable & Wireless partnership agreements. Be responsible for meeting agreed sales and order targets in the assigned geographic areas in conjuction with the associated Ericsson Local and Major Local Companies. Maintain an overall assessment of Ericsson global business levels with Cable & Wireless. Maintain and develop the team to deliver against existing commitments and plan and prepare for the future by identifying and addressing requirements in terms of competence and succession planning. Work closely with the team to develop competence in line with the changing needs of the business. Manage, coach and conduct performance appraisals for direct reports to facilitate their development and effective performance as a motivated and empowered team.

Qualifications, experience and knowledge: Essential; HND level or equivalent. Minimum 7 years experience in a telecommunications environment. Desirable; Appropriate technical courses and willingness to take ongoing training in any fields necessary to keep up to date in both technical and business terms.

Business Development job profile Page 3 of 2 Business Development Manager (C&W) Ericsson Ltd Communications and Special Networks Division

Contact: Fred Christmas

Ericsson AS in Norway, Oslo (ETO)

QUALITY ASSURANCE (QA), CONFIGURATION MANAGEMENT (CM) and PROCESS- & METHODOLOGY COORDINATORS.

Department of Internet and Broadband development at Ericsson Norway consist of approx. 30 persons. We are working with system development, service and network solutions for broadband and the growing Internet market. Ericsson in Norway has the product responsibility ("Product Profitability") for the Multimedia Telephony System (MMTS) within the Product Line IP Services of BU Datacom Networks & IP Services. Our department has the provisioning responsibility for MMTS.

To maintain competitive power of our products, we participate in national and international research programs. We work in an international atmosphere and constitute one of the most capable design centres within the area in Norway.

Our system development is based on object oriented technology, JAVA, CORBA and with fast pragmatic incremental design.

To strengthen our capabilities even further, we seek technologists to join our fast moving organisation.

QUALITY ASSURANCE (QA) COORDINATOR

● As the department's QA Coordinator, you will give key support to the project managers in the planning and follow up activities, and be in charge of project assessments. Throughout the project lifetime you will also coordinate and participate in QA activities, in order to secure the total quality of the finished product. We are looking for a person that has experience in SW development, preferably in design and project management using PROPS or similar processes, as you will be working in close relation to development projects. In addition, you should have knowledge and some experience in Q-standards like CMM and ISO 9001.

CONFIGURATION MANAGEMENT (CM) COORDINATOR

● As the department's CM Coordinator, you will have responsibility for the configuration management of SW products being developed within the department. Through this work you will be involved in development projects implementing CM.

Your assignments will be: Adapting current CM process to suit the development project needs. Prepare and implement CM plans and strategies in projects. Structuring of products in PRIM/GASK. Participate in CM fora and common interest groups within Ericsson. We are using the CM support-tool ClearCase.

PROCESS- & METHODOLOGY COORDINATOR

● As the department's Process & Methodology Coordinator, you will be responsible for: Further development of the department's processes and methodology for system development and CM. Support and participate in development projects.

You should have competence and interests within the areas of object-oriented SW development. We use incremental design methods based on UML, and we use ROSE from Rational's development tool family. You must have a good understanding of the role processes and methodology play in development projects.

Contact: Torbjørn A. Furu, tel.: +47 66 841211 (etot-fu@eto.ericsson.se) or Olaf S. Moe, tel.: +47 66 841219 (etoosm@eto.ericsson.se) Application: Personalavdelingen, Reference: TX/B, Ericsson AS, P.O.Box 34, N-1361 Billingstad, Norway

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Ericsson Communications Ltd., Auckland, New Zealand

MARKETING ENGINEER, GSM SYSTEMS

● Job Description: New Zealand being a totally de-regulated market have attracted a number of new opera-

tors. The up-band spectrum is due to be released in the beginning of 1998 and Ericsson Communications is currently looking for an individual to take responsibility for business concepts in respect to GSM Cellular services being planned by three different operators. This person will be part of a new dedicated group for the purpose of developing Ericsson Communications business opportunities.

Requirements for the job: The person we are looking for should have had a minimum of four years experience of a similar background and should also have a good knowledge of GSM development plans.

Contact: Steve Inglis Memo ID: ENZSAI Application: Steve Inglis Corporate Marketing Manager Ericsson Communications PO Box 14616 Panmure Auckland New Zealand

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Nippon Ericsson K.K., NRJ, Japan

NEW CHALLENGES IN JAPAN -
PDC and 3rd generation mobile systems

The Japanese telecommunication market is very challenging. Japan is one of the quickest growing markets with one million new subscribers every month.

We have a well established PDC-business and soon we will launch our first mobile phone on the market. We have now been selected as a partner in the development of an experimental system for the third generation mobile system based on Wide- band CDMA (W-CDMA).

Nippon Ericsson K. K. (NRJ) is right now looking for more employees in the area of Marketing as well as R&D:

MARKETING SUPPORT – FUKUOKA

● Our regional office in Fukuoka is now looking for a person responsible for PDC Marketing Support. Job responsibilities will include technical support in tenders/offers and negotiations towards our customer.

You should have a good system knowledge and experience of network planning, testing and preferably also IN. Fukuoka is located in the south of Japan with nice surroundings and beaches.

Contact: Henrik Puustinen General Manager, Fukuoka Regional office. Phone: +81-92-724-0803 Memo: NRJ.NRJHPU

MARKETING AND MARKET SUPPORT – SAPPORO

● Our regional office in Sapporo need a person that can take the responsibility for Marketing and Product Marketing. You will have the overall responsibility for developing the customer Contacts, determining customer requirements and develop new business opportunities.

The ideal candidate has an extensive mobile telecom experience and has been working as a manager. Good communication and interpersonal skills are required as you will work in an international environment close to the customer.

Sapporo is located in the north of Japan and offers good possibilities for outdoor activities as it is surrounded by mountains and ski resorts.

Contact: Bo Sjunnesson General Manager, Sapporo Regional office Phone:+81-11-210-6931 Memo: NRJ.NRJBOSJU Regarding the two market positions you can also contact, ERA/JMC Hans Jahrne Phone: +46-8-757 29 23 Memo: ERA.ERAHJAR

WIDEBAND CDMA / ATM DEVELOPMENT

● In the end of the year we shall deliver a W-CDMA/ATM experimental system to NTT- DoCoMo, one of the world's largest mobile telephone system operators.

The wide-band cellular systems unit at NRJ has the technical customer interface responsibility for this experimental system, as well as for standardization activities in Japan for 3rd generation cellular systems.

This is a unique opportunity to work together with one of Ericsson's largest and most demanding customers in developing the first W-CDMA/ATM cellular system in the world. This unit is now expanding and is therefore seeking new, highly qualified personnel in the following areas:

PRODUCT MANAGER – PACKET DATA

● Responsible for packet data standardization and product management for W-CDMA experimental system.

You should have several years of experience from working with data communication development and standardization. Deep knowledge on TCP/IP is also needed.

PRODUCT MANAGER – CODECS (2)

● Responsible for speech and video codecs standardization and product management for W-CDMA experimental system. This position requires several years of experience from working with e. g. speech codecs, either development or standardization.

PRODUCT MANAGER – RADIO NETWORK CONTROL (3)

● You will be responsible for radio network control related standardization in ARIB, and in customer discussions of the W-CDMA experimental system regarding these issues.

This position requires several years of experience from working with radio resource management for cellular systems e. g. PDC, D-AMPS or GSM.

PRODUCT MANAGER – RADIO ACCESS SYSTEMS (4)

● Product Manager working with BTS issues for the W-CDMA experimental system.

This position requires 5 years of experience from MBS development or product management for PDC, GSM or D-AMPS.

RESEARCHER W-CDMA (5)

● Researcher in layer 1 structure, receiver technologies and/or radio network algorithms.

You should have several years of experience from research or development of radio interface technologies and good knowledge of CDMA.

Contact: Håkan Ohlsén, Senior Manager Phone:+81 3 3222 4361. Memo: NRJ.NRJHOHL E-mail: hakan.ohlsen@nrj.ericsson.se

PRODUCT MANAGER – SWITCHING SYSTEMS (6)

● You will be working with the core network part of the W-CDMA experimental system and with core network standardization. This position requires several years of experience from working with telecommunications, mobile or fixed.

Contact: Thomas Rex, Senior Manager Phone:+81 3 3222 4348. Memo: NRJ.NRJTREX E-mail: thomas.rex@nrj.ericsson.se

PROJECT MANAGER – W-CDMA EXPERIMENTS (7)

● You will plan and execute the experiments together with our customer and the home organization.

This position requires several years of experience from field experiments for cellular systems. Experience for work with application solutions is highly valuable.

CUSTOMER PROJECT MANAGER (8)

● You will lead the negotiations with our customer regarding the technical content of the W-CDMA experimental system. You are an orderly negotiator with several years of Ericsson background.

Contact: Mikael Halén, Senior Project Manager Phone:+81 3 3222 4399. Memo: NRJ.NRJMIHA E-mail: mikael.halen@nrj.ericsson.se

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For all the positions above a very good conduct of English language, both oral and written, is an absolute requirement.

It is highly desirable that the applicant has power of initiative, as well as good team- working and communication skills.

Build-up and transfer of competence to our Japanese employees will be an important part of the assignment.

For general information you can also contact our HR-function: Nils Enstam, Manager Phone:+ 81-3-3221-8205. Memo: NRJ.NRJNREM

Ericsson Ltd, UK

TECHNICAL SUPPORT MANAGER OVERSEAS

● A vacancy has arisen for the position of Technical Support Manager Overseas (TSO). This senior management position will be a very challenging role leading a team of 73 engineers and at times up to 30 trainees.

The successful candidate will be responsible for the following sections.

GAS (Global Application System) Group
This section conducts product line maintenance for Ericsson's fixed-network local (12.3) and transit (Transgate) switching products.

MAS (Market Application System) Group
This section packages together standard fixed-network and market products for delivery to countries in the Middle East and Africa.

TACS-ESO (TACS Ericsson Support Office) Group
This section delivers product updates and provides second line support for TACS/AMPS mobile networks in countries that include Russia, Ireland, Nigeria, Pakistan etc.

GSM-ESO (GSM Ericsson Support Office) Group
This section delivers product updates and provides second line support for GSM mobile networks in countries in the Middle East and Africa.

RNE (Radio Network Engineering) Group
This section provides services and expertise in the field of mobile radio network planning and optimisation.

The successful candidate should have the following skills: A thorough knowledge of Ericsson's fixed & mobile network switching products and services. An ability to manage several concurrent projects with timely delivery and excellent quality. An ability to lead and motivate a large team of engineers. An ability to liaise with customers and within the Ericsson group at senior management level. Excellent interpersonal and presentation skills. In a fast changing environment, the ability to set-up or restructure technical support needs to meet new or changing opportunities.

Applications are invited from personnel with 8 or more years experience in a technical role of which 2 must be in a supervisory or management position.

We invite applications from personnel internally and externally who believe they have acquired sufficient expertise in the relevant areas to undertake this role.

As a screening process based on applications received will take place, it may not be necessary to interview all candidates.

Applications for the above should be sent in writing enclosing a detailed Curriculum Vitae to the undersigned before Monday 28th July, 1997. Please quote job title and HR/-97:0486: Margaret Gaffney Employee Relations Manager LM Ericsson Limited Beech Hill Clonskeagh Dublin 4

Ericsson Communications, Canada

PRODUCT MANAGER GSM

● As a member of the Product Management, GSM team, you will participate and champion standardization and regulatory issues for Ericsson Communications Canada on RF and BSS issues. You will perform local product management activities for the BSS nodes, study potential topics for Canadian research initiatives and champion discussions on third generation PCS systems.

Your Master of Science in Electrical Engineering or equivalent academic or career experience with specializations in communications such as RF, Cellular/PCS or microwave have prepared you for this challenging role.

If you are experienced in RF planning, Standardization Forums, BSS Product Management or marketing have and a desire for a new challenge in the growing Canadian market, you are the person for this post. Some research or regulatory background is an asset.

Contact: Bennet Wong or Roberto Poujol by phone (905) 629 6700, fax (905) 629 6701, MEMOID: EMCROPO, EMCBEWO Application: 5255 Satellite Drive, Mississauga, Ontario Canada L4W 5E3

Ericsson Taiwan Ltd.

TECHNICAL DEPARTMENT MANAGER

● We are looking for a technical department manager to co-ordinate and plan the strategy of technical sales towards the customer, and to develop the competence of the LPM/MND technical group and product knowledge within the RMOG Account Division.

Responsibility: To work with the Account Director and Sales Department Manager to plan and promote technical solutions to meet the customer's requirements and Ericsson's strategic goals.

To develop a close relationship with the customer's senior technical engineering staff, in order to clearly understand the customer's requirements and to ensure that the customer's expectations are met or exceeded.

To work closely with the CPM Manager & FSO Manager to ensure that the product knowledge is distributed through the whole division for the life of the product.

Job Requirement: You need to have at least 3 years of experiences in mobile telephony with sufficient GSM knowledge. Previous experience in line management is essential. You also need to be independent, selfmotivated, analytical and tactful in communication. Ability to communicate in Mandarin will be a plus.

Contact: Young Lin, Director. Memo-id:ERT.ERTYHL, Tel:+886-2-746-1714 or Genevieve Lu, HR. Memo-id:ERT.ERTGELU, Tel:+886-2-746-1780

Ericsson Telecomunicazioni SpA, Milano, Italy

Ericsson Telecomunicazioni SpA is presently engaged in several offers to potential new GSM (900 and 1800 MHz)-Customers. As we believe in our success we have started an extensive pre-recruitment for our office in Milano .

To strengthen the local team we are searching now for Expertise and Management for the future FSC.

A System test Plant is already being installed in Milano. Some characteristics of this Test Plant are: mixed SW, CME20 R6.0 and R6.1, links to allow for interworking tests with other vendors equipment.

Demonstration of functionality may start already by the end of August. The FSC will be supported by an ESO outside Italy.

The following positions are available in the new FSC:

FSC-Manager

1 SS-Expert

(Verification, Trouble shooting)

2 BSS-EXPERT

(Verification, Trouble shooting)

1 TCM expert

to help establish TCM-routines, ISP-measurements. Experience form the use of MSS is appreciated.

The persons interested in collaborating with us shall fulfill the following requirements: At least five years experience in the indicated area/product. Be service oriented and willing to collaborate with the Customer. Have own initiative and will to improve working methods. Have will to share own experience with the local employees. Have good skills in written and spoken English. Knowledge of Italian is considered an advantage.

Contact: Enrico Brancaccio, EITA.TEIEBRA or Patrcia Curutchet, EITA.TEITRI

Ericsson Telecommunications Pte Ltd., ENO, Singapore

RADIO NETWORK ENGINEER (Cell Planner)

The Radio Network Design, RND, department in Singapore is supporting our customer's GSM900 network with advanced cell planning activities. This includes new techniques and methods for high capacity planning, such as the Multiple Reuse Pattern (MRP) concept, indoor coverage, microcells etc. in order to create a modern, high quality cellular system.

● We are looking for an experienced Cell Planner for a one-year-contract in Singapore. The Cell Planner is expected to be responsible for all radio network activities including tender preparation, site surveys, frequency planning and radio network tuning. In addition to this, the Cell Planner should share knowledge and build up the competence level within the RND department. improve and create the means for communication with the home organisation in Sweden. ensure proper work methods and procedures are in place

The Cell Planner will report to the Product Management and the Mobile Network Design Manager. The successful candidate should have a deep knowledge of the CME20 system and experience of Radio Network Design.

Contact: Chong Wai Yee, ENO, Mobile Network Design Manager, + 65 350 1533 or Bengt Mäler, ERA, Radio Network Design Manager, + 46 8 404 50 31 Application in English: Carin Kasberg, memoid: ERAC.ERACASA, Address: Ericsson Radio Systems, SG/ERA/LNH Carin Kasberg, Allén 5 Sundbyberg, SE -164 80 Stockholm, Sweden

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L.M.Ericsson A/S, Copenhagen

ENGINEERS/TECHNICIANS – ENGINEERING DEPARTMENT

● Within the engineering department, we are offering you the opportunity to join a group of 17 persons resposnible of projecting AXE.

Job description: prepare technical documentation for new projects and digitalisation of AXE based on customer needs, consult and guide our customers concerning technical questions, control and specify received customer orders.

Personal profile: engineer, or technician with work experience, familiar with the IE-tool PLEASE, experience with software devel- opment and knowledge of UNIX and CAD on user level, able to see a personal challenge in seeking new knowledge, give professional service to customers, quality minded and responsable.

Contact: Jim Højfeldt tlf. +45 33 88 35 90. The consultancy company Gaarn Thomsen & Partners A/S will assist in the selection. Application marked "9779": Gaarn Thomsen & Partners A/S, 5 Fridtjof Nansens Plads, 2100 Copenhagen Ø, Denmark tfn. +45 35 43 86 00.

Ericsson Telecomunicacoes, Portugal (SEP)

Ericsson Portugal has been very successful to address the mobile telephony market. Ericsson Portugal is a small fast growing local company with approx. 200 employees. The company is located in a suburb to Lisbon. SEP offers interesting and exiting job opportunities on a fast growing market in a refreshing environment. We are now seeking GSM experienced people on short and long term to complement our account teams. Knowledge in Portuguese is an advantage but not a must.

LOCAL PRODUCT MANAGERS

● You will cover the whole Mobile Network Design area or part of it. You have preferably experience from SS, BSS or radio network design.

MARKETING MANAGER

● You will be responsible for daily customer Contacts, presenting our products and preparing offers. You have preferably experience from commercial activities or product management.

Contact: Hakan Kastlander +351 1 4249419, memoid SEP.SEPHKAS or Tor Olofsson +351 1 424956, memoid SEP.SEPTOR or Christer Ahlner +46 8 4048407, memoid ERAC.ERACRAR

LM Ericsson Ltd, UK

IN SERVICE APPLICAITON DESIGNERS

● Vacancies have arisen in the LMI SD&D Centre for the position of Service Application Designer. As a service designer you will work with software development on the Ericsson Intelligent Network. (IN) platform, using the latest IN technology.

Currently, the work is focused on the Business Communications Group of services, wherein the SD&D has full life cycle responsibility for the Information & Toll-Free services. As a designer you will be involved in

all phases of the development, from requirement management & design, through implementation, function test and Network Integration Test.

The position requires a knowledge of telecommunications networks and software design. The evolution on IN technology, moving from pure AXE platform to General Purpose Computers, requires the SD&D to broaden its design competence.

The operation is characterised by a high degree of customer focus, international communication, flexibility and enthusiasm.

An engineering, computing or telecommunications qualification is preferred, but applicants with other relevant qualifications are also very welcome.

We invite applications from personnel who believe they have acquired sufficient expertise in the relevant areas to undertake this task. The position may involve a certain amount of foreign travel.

As a screening process based on applications received will take place, it may not be necessary to interview all candidates.

Applications for the above post should be sent in writing to the undersigned before Friday 18th July, 1997.

Please quote job title and HR/-97:0469 on application: Margaret Gaffney Employee Relations Manager LM Ericsson Limited Beech Hill Clonskeagh Dublin 4 Memo ID LMIMGY

The LMI SD&D Centre commenced business in July 1995 and is now in a phase of extensive expansion and competence build-up. The SD&D is working in various areas within Network Intelligence (NI) based Service Application Development across fixed and mobile networks. The SD&D is part of a virtual organisation which has global responsibility for all NI products within Ericsson. Consequently there is a high level of communication outside LMI, and work in cross-cultural development and delivery projects.

In 1997, the SD&D will further expand it's operation to meet it's 3 main objectives:- To contribute significantly to making Ericsson the world leader in NI service delivery to Global Customers; to help TE achieve their vision of becoming the most advanced service provider in Europe; to develop a portfolio of own complimentary products in areas allied to NI services.

Ericsson Telecom AB-Telephoneplan Marketing and Business Management.

PRODUCT MARKETING MANAGERS

● Our particular marketing unit has the responsibility for the various markets in Western Europe, Scandinavia, Australia, Mexico and the Carribean. We work very closely with the sales force in the field and work as 'shadow account managers' requiring a full knowledge of customers needs and problems, through personal contacts with the customers.

We also play an active role in the creation and distribution of market support material. Product presentation internally and to customers are often made by us. We work on tenders to supports the marketing teams in the various countries. We also have responsibility to issue pricing guidence.

JOB REQUIREMENTS: We have a few openings right now. The ideal candidates will have familiarity with the AXE system platform, and certain amount of marketing skill/experience. Experience in marketing in other companies will also be greatly valued.

Good personality, good command of the English language, written and spoken are very important for these positions.

Good presentation skills are required as well. Travels to the various market will be needed.

We invite you to explore this opportunity, whether you are an experienced veteran or a new graduate with little experience.

Contact: Rickard Åberg ETXT.ETXRICK 08 7199559 or Vijay Naik ETXT.ETXNAIK 08 7199364

Ericsson Inc.

INTELLIGENT NETWORK ENGINEER

The UNIX Design Group of the Network Systems Division, located in Richardson, Texas, is looking for someone to work on a two year contract to develop, integrate and test products for the Intelligent Network.

● Duties of the position will include participation in functional specification, design, implementation and testing of UNIX based IN products. Must have a good knowledge of IN concepts, CS1 protocol and protocol extensions. Requires the ability to apply IN knowledge to products based on general purpose computers and a BS level degree in computer science, electrical, or computer engineering.

Contact: Barna Youngs, phone 972-583-5670, MemoID: EUS.EUSBAYO, fax 972-669-6861

Our young research & development centre, Ericsson Eurolab Deutschland GmbH, located at Herzogenrath, near Aachen offers the following vacancies: The system house AXE Mobile Core (AMC) is looking for a

PROCESS ENGINEER

● The main responsibility is the improvement of work processes within the AMC organization.

The position is located at Ericsson Eurolab Deutschland GmbH, Herzogenrath, and reports to EED/U/OQC.

The main tasks include: Coordination of process management (PM) activities. Project management of PM projects. Maintenance and improvements of design processes. Establishment, maintenance and improvements of operational processes. Being the driving force for process management.

As a suitable candidate, you should be familiar with the Ericsson- way-of-working and the existing processes in your current work area. Knowledge of different methodologies used in software engineering is a definite plus. You should have a very good knowledge in how to establish, maintain and improve processes. Working as a moderator and consultant a structured way of thinking, excellent communication and cooperation skills, perseverance and the ability to be the driving force for PM are important personal qualities. Overall you should see this job as a challenge in improving our existing way of working. Participation in international AMC meetings is also part of the job. Fluency in written and spoken English is a must.

If you have questions and/or are interested, please refer to your colleagues until the 15.08.1997: Human Resources Doerte Kaulard, Dial:+49-2407-575-163 Memo:EED.EEDDKA or Group Manager Quality & Methods AMC Andreas Bleeke Dial: +49 2407 575-163 Memo: EED.EEDDKA

Within our GSM Test Plant we have an open vacancy for a

STP SUPPORT ENGINEER

● Your main tasks include: Routine maintenance of the System to ensure the operation of the test plant, the IO devices and the power plant. Upgrading of STP as reqired by CNI or project. Install test plants and IO devices. HW troubleshooting and repair to PBA including; a Locate & replace PBAs, b Send faulty PBAs or devices for repair, c Keep a record of faulty parts and spare parts, d Change or repair cables, e Perform mechanical repairs or changes, f Perform configuration changes as requested by projects.

As a suitable candidate you have a solid background as Electronic / Telecommunications Engineer, Technician or equivalent. Verbal and written english is an absolutely must. Previous experience as Radio or Telecommunication Engineer or Technician or Installation is a clear advantage.

Furthermore we are looking for an open-minded person with god communication and cooperation skills. You should be initiative and show good planning and organization skills. A local contract is offered for this position.

Contact: Human Resources Doerte Kaulard, Dial:+49-2407-575-163 Memo:EED.EEDDKA or Group Manager System Test plant Guenter Godau Dial: +49 2407 575-312 Memo: EED.EEDGGO

Ericsson Slovakia Spol SRO

PROGRAM MANAGER IN BRATISLAVA

● This position will be responsible for agreements, with the costumer and within the project organisation, regarding which products to deliver and when. Logistics is the major part of work for the program manager to control.

This work includes: ordering products from suppliers within and outside the Ericsson group. follow-up of deliveries. customs clearance of arriving shipments. warehouse administration. local transports in the Slovak Republic.

This position will be reporting to the project manager and requires at least 2years experience of logistics and GSM product structure. You must be prepared to work continously as an expatriate in Bratislava for 6-12 months.

Contact: Per Assarsson, phone + 421 903 722 681 or fax 421 7525 4359 memoid ERAC. ERAPASS. Application: Ericsson Slovakia Spol SRO Per Assarsson, Stara Vajnorska 90 Bratislava 83104 Slovak Republic.

Ericsson Radio Systems AB, Sundbyberg

TECHNICAL MANAGER – TAIWAN (TransAsia)

The deregulated Cellular market in Taiwan have resulted in six (6) private GSM/DCS operators. Two of these Operators are today Ericsson customers. The latest contract was signed with TransAsia (South Western Bell).

Our local company ERT are now building up the Customer Account Division for TransAsia. This customer have got a GSM900 license in the southern part of Taiwan and the Office is located in Kaochung.

● We are now looking for a Technical Managers for this consortia. The Technical Manager is responsible for all technical issues related to Products , Features , Applications and Network Design.

Your resposibility will be :

Marketing phase: Do technical presentations and participate in technical discussions related to new business concept.

Tender phase : Coordinate all technical work in our offer, eg. capacity calculations , 3rd party equipment , dimensioning ,network design , tech. SOC.

Project phase : Technical interface to the customer during the project. Technical support the Project Mgmt during the project.

Operation phase : Technical planning (ASM plans) together with customer , and Support organisation. System performance issues.

You should have GSM competence. You should have worked at least 5 years within Ericsson with Product Management , System Design , System Verification or System Support.

Contact: SG/ERA/LN/OC Jan Lönnström, memoid: ERAC.ERAJAL tfn.no: +46 8 757 33 14 or SG/ERA/LNH Carin Kasberg, memoid: ERAC.ERACASA tfn.no: +46 8 404 55 87 Application: SG/ERA/LNH Carin Kasberg Ericsson Radio Systems AB Allen 5, 172 36 Sundbyberg, Sweden faxno: +46 8 757 58 10

Ericsson Eurolab Deutschland GmbH, Research and Development Centre, Radio Communication, Nuremberg, Germany - EED/N

DEPARTMENT MANAGER – Product Development Transcoder

● The general responsibility of the department manager is to plan, lead and supervise the operations of the department product development transcoder in EED/N. She/he has to guarantee that the required goals are fulfilled, the needs of the company are satisfied, the department is efficient and competitive. This position reports directly to Jürgen Schmidt, EED/NC.

The main authorities and tasks are: Build up the competence in the area of Transcoder.

Leadership: Perform appraisals, participate in recruitment and introduce new personnel. Build up the required staff. Competence development of the staff. Be an interface between ERA/X and EED/N.

Responsibility: Plan, realize and control department's activities. Technical responsibility. Quality assurance.

As a suitable candidate, you are Ericsson employee and should have worked at least for five years in design, project or line management. You should also have a minimum of two years experience as a manager with personal responsibility. It is desirable that you have a good general knowledge in telecommunication and especially in software design. The position requires organization capability, talent to improvise, orientation on results, the ability to make decisions, also good communication and people orientation skills. The position offers you good opportunities to work with different cultures and build up a department from the beginning. The unit and Human Resources will give support for your individual development and training.

Contact: Jürgen Schmidt, Vice President, R&D Centre Nuremberg Radio Communication, phone +49 911 5217-101, Memo EED.EEDDJUS or Mikael Hofverberg, Department Manager Product Development Transcoder, phone +49 911 5217-122 Memo EED.EEDMHO Application: Norbert Lechner, Human Resources R&D Centre Nuremberg Radio Communication, Phone +49 911 5217-111, Memo EED.EEDNLE

Ericsson (China) Company Ltd - ETC, Guangzhou

LOGISTICS MANAGER

As the leading supplier of Fixed and Mobile Networks System in South China, we are facing a fast growing market and exiting opportunities. To strengthen our logistic function, we are looking for a LOGISTICS MANAGER.

● Reporting to the Regional Controller, you will be overall responsible for a team of 11 people working with logistic part (material supply) in the customer projects. As a team leader, you will be in charge of the daily operation of the department and secure the fulfillment of the department purpose and objectives in the most cost-efficient manner.

You are likely to have a University degree, a minimum of 3 years with relevant experience within Ericsson environment. Successful leadership performance, integration skills, international mind, good language abilities, and team spirit are a must.

If you feel that you are the right person for this challenge, or wish to have more information:

Contact: Yi Yuan Wah, memoid ETC.ETCYYW Application: Wendy Huang ETC.ETCWENH

Ericsson Ltd, UK

LMI MAKES THE DIFFERENCE - WILL YOU ACCEPT THE CHALLENGE?

LM Ericsson Ltd, Ireland, (LMI), has been awarded the responsibility for the Product Unit Switched based Business Services. This responsibility has been entrusted to LMI by BU Public Networks - Product Line Switching, and represents a new approach to addressing Ericsson's competitive development in this key market of corporate business services.

To meet this challenge, LMI are establishing a Product Unit based in Dublin, which will focus on the marketing and product evolution of the Business Services for a global market. An underlying principle of LMI's approach is to add existing design centres to an existing business oriented organisation, thus direct the operations of a number of local design centres, where the development and provisioning of the products will be executed.

The Product Unit will apply a small company approach to its operation, working with a high degree of entrepreneurship, flexibility and innovation. Market orientation will be the guiding principle, where the emphasise will be on creating business opportunities deriving from customers need for total solutions.

The product portfolio currently consists of BGC, BGS and BCM products: BGC/BGS - Business Communication packages addressing Private and Wide Area Centrex services and Advanced Virtual Networks. BCM - A TMOS based Business Communication Management System providing a user friendly BGC/BGS operator interface.

The primary objective of LMI is to further expand the product offering and the market penetration by creating a strong market concept and by expanding the product architecture and offering to provide total Business Services solutions.

● LMI seeks people who want to contribute in the build-up and future success of the Product Unit for Business Services, and who want to make a real difference to the product evolution and business approach taken by Ericsson in the key market of communication services for corporate customers. You should also see the challenge in being a part of a new, market driven operation, operating in a very dynamic environment. The character of the Product Unit Business Services operation requires a high degree of business communication outside LMI as well as work in cross-cultural development and delivery projects.

Initially, we seek key persons to take on responsibilities in the areas of Business Strategy, Product Management, Systems Management, Support Management, Multi-Project Management, Competence Management and Product Innovation.

Are you a Team player? Are you driven by ambitions to take part in the build-up of a new operation? Will you accept the challenge in contributing to the future success for Business Communication Services on a global arena?

Contact: Don Murphy, quoting the Product Unit for Business Services, via phone on +353 1 207 2162 or via memo LMI.LMIDM.

Ericsson, Duesseldorf, Germany

ACCOUNT MANAGER FOR INTERNATIONAL / GLOBAL OPERATORS

Customer Unit New Network Operators works with new and international operators establishing in Germany. The German market is beeing deregulated and this has opened up possibilities for operators who are active on other markets to enter Germany. The operators focus on making sure that they are profitable in a short time as possible.

● To handle this great opportunity to sell Ericsson equipment and services one more person will be employed in the account management team for internatinal operators. Currently we are active towards 17 operators. We cooperate with other Ericsson subsidiaries around the world to handle these new accounts. Speed, proactivity and business understanding is key to be succesful as an account manager in this environment.

We are looking for someone who has experience from account management/sales or marketing either of telecom or datacom solutions. You have international attitudes and have a good knowledge of written as well as spoken English. You enjoy working in teams and have an entrepreneurial mindset.

Contact: Dept. Human Resources (edd.eddina). Application: ERICSSON, Division New Network Operators, Werftstrasse 37, 40549 Duesseldorf, Germany Phone: +49-211-534-4342 Jutta Hartmann (edd.eddjuha) Fax: +49-211-534-4345

Ericsson Toshiba Telecommunication Systems K.K. JAPAN

SENIOR MANAGER MARKETING IMPLEMENTATION SERVICES AND CSF SUPPORT

Ericsson is supplying the CMS30 systems for the PDC (Japanese cellular standard) network in Japan. Our customers networks are now handling more than 2.3 million mobile subscribers and are increasing rapidly. In addition to the tremendous growth, the network will also soon be added with our sophisticated AM based Intelligent Network. Our headquarters is situated in Shin Yokohama (near Tokyo) with regional offices spread around Japan.

● Main task: create goal, strategies, activities and follow up implementation and integration services, including pricing of implementation/ integration services. support the CSF (TTC) flow through activities such as contract reviews, continously updated contract templates, co-ordination of HW forecasts, ensuring that transferpricelists, product substitution and dimensioning guidelines are updated by relevant departements, develop contractual templates for subcontractors and negotitate with subcontractors.

The position reports to the general manager for Marketing department and will initially be in charge for a unit comprising of 3 persons.

You should have a good knowledge of cellular systems and preferable an experience in implementation, e.g MSC testing. Managerial Experience is expected, but you should also have good skills in communication and

co-ordination between different units in order to create good team spririt and customer focus.

Starting date: as soon as possible Location: Shin-Yokohoma, Japan

Contact: Eva Lindqvist, phone +81 45 475 0089, memo-id: NRJ.ERJEMLT Application by memo: ERJ/P/PC Michael Regnér, memoid: NRJ.ERJMR

Ericsson UK

PRODUCT MANAGERS

● Based in Guildford, Surrey. Ericsson Ltd Communications and Special Networks Division

The Product Management team plays a critical role in maintaining and enhancing the division's business success through the strategic management and development of Ericsson's products. The Product Manager is responsible for contributing to the definition of product programme (current development activities) for a specific product area and on behalf of Product Management. The engineer actively seeks advice and support in order to resolve technical issues and develop his/her own competence.

Key responsibilities: Contribute to the preparation of product programmes for current development activities on behalf of customers. Maintain knowledge of developments in the telecommunications industry and marketplace (particularly in the UK). Maintain up-to-date knowledge base for assigned products. Participate where required in standard product planning. Maintain close contact with and influence the strategic product management function to consider UK requirements for standard development. Represent the UK market and its requirements to Ericsson's development organisations worldwide. Maintain product requirement specifications in accordance with customer requirements and Ericsson's product evolution strategies. Provide technical support to the market and operations organisations in their business activities relating to a specific customer. Maintain customer product plans and customer product programmes as required. Present technical information to customers as required. Analyse contracts regarding included functionality. Follow development of market adaptations through to completion and ensure it fulfils requirements. Order required development work. Advise and report progress and status of all activities being undertaken. Maintain quality standards.

Qualifications, experience and knowledge: Essential; 3-5 years' experience of one or more product lines within Ericsson. Qualified to degree level in engineering. Thorough knowledge of the network environment and the application of the relevant products to that environment. Desirable; Possible backgrounds: Product Engineer in similar area. Systems Support Engineer. Systems Design Engineer. Some sort of marketing activities giving experience of customer relations.

Contact: Linton Cook

Based in Guildford, Surrey. Ericsson Ltd Communications and Special Networks Division

DATA TRANSCRIPT ENGINEERS

● The Data Transcript section forms part of the Installation Test & Data Transcript department. The section is responsible for providing all data required for commissioning, Integration Verification & Acceptance (IVA) of new switches, cellular parameter data for Integrating and Commissioning (I&C) of new cell sites, cellular parameter data for optimisation of cellular network, and implementation of new software functionality. The Data Transcript role has two specific areas of responsibility being switching (physical) and cellular (logical). The Data Transcript Engineer is responsible for the creation and adaptation of loadable exchange dependent data files for AXE systems in all the previously mentioned areas. This is achieved by taking various input requirements and translating them into MML data outputs using the tools available. The engineer is responsible for working as part of the team and maintaining good working relationships within the team and with its key customers. He/she will be responsible for creating procedural documentation and Service Level Agreements where required and ensuring that they are adhered to. He/she will continuously strive to improve and develop new and existing processes.

He/she will actively seek to highlight and develop improvements in Data Transcript tools. Key responsibilities Work within the Installation Test & Data Transcript department liaising with appropriate members of the department and other Ericsson staff to engineer Data Transcript. Work as part of the Data Transcript team ensuring its smooth running, safe and proper working practices, and team spirit are maintained. Adhere to group work instructions, procedures and Service Level Agreements at all times. Review, develop and improve the procedures, processes, SLA's and tools of the group. Receive and verify the hardware allocation data (C3 file) Receive and verify the switch specification document for new switch implementation. Receive and verify change requests for new cell sites and optimisation. Produce, compile and load data transcript sub-files (DT1) for hardware commissioning according to requirements. Produce, compile and load data transcript sub-files (DT2) for Integration, Verification and Acceptance according to requirements. Produce, compile and load data transcript sub-files (ISD) for delivery of switch to customer at an In-Service build level according to requirements. Produce and compile data transcript files for cellular parameters for Installation and Commissioning of new cell sites. Produce and compile data transcript files for cellular parameters for the optimisation of the cellular network. Verify that the output of data transcript files produced both manually and by the various system tools are integrity checked to the Customer requirements. Audit all loaded data transcript against off line sub-files. Audit all data before delivery to the Customer. Support the on-site Data Transcript activities for commissioning, IVA and prior to Customer acceptance

Qualifications, experience and knowledge: Essential; At least 2 years experience of Data Transcript in AXE 10 environment, or other proven testing/switching /support experience. Computer literate. Able to travel within the UK and overseas on occasion. Desirable; Higher technical qualification in telecoms, radio or software related subject. Working knowledge of Ericsson procedures.

Knowledge of telecom network principles. Knowledge of radio principles. Knowledge of exchange data principles. Knowledge of UNIX based applications & generation of small scripts. Knowledge of programming/macros

Contact: Chris Back

Ericsson (China) Company Ltd. - ETC, Guangzhou

As the leading supplier of Fixed and Mobile Networks System in South China, we are facing a fast growing market and exiting opportunities. To strengthen our logistic function, we are looking for :

LOGISTICS MANAGER

● Reporting to the Regional Controller, you will be overall responsible for a team of 11 people working with logistic part (material supply) in the customer projects. As a team leader, you will be in charge of the daily operation of the department and secure the fulfillment of the department purpose and objectives in the most cost-efficient manner.

You are likely to have a University degree, a minimum of 3 years with relevant experience within Ericsson environment. Successful leadership performance, integration skills, international mind, good language abilities, and team spirit are a must.

If you feel that your are the right person for this challenge, or wish to have more information, please

Contact: Yi Yuan Wah (ETC.ETCYYW). Application: Wendy Huang(ETC.ETCWENH)

Ericsson Radio Systems, AB

SYSTEM DESIGN – WIDEBAND INFRASTRUCTURE

The Cellular Systems-American Standards Business Unit of Ericsson Radio Systems AB, located in Stockholm, Sweden, is in search of qualified candidates to ramp up our activities in several system design areas. The System Design organization is responsible for the continued achievement of technical excellence of our system by proactively investigating and promoting technical opportunities originating from internal and external sources for integration into our family of products.

Our activities are aimed at orienting future development and is thus the earliest step in the provisioning process. One of several key activities is to perform advanced system planning for the short and long term evolution of our system.

We have begun the process of incorporating some relatively recent but significant technology impacts to our system. Wideband access and datacom capabilities are clearly important elements in developing our products and standard to meet the needs of wireless subscribers in the near future.

● We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Wideband infrastructure. The objective is to define the technical roadmap in order to achieve wideband data rates on the radio access network. This is to be done by analyzing the prevailing technology options and appropriate limitations.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant mobile telecoms knowledge (5 years+) with some datacom knowledge. Mobile radio network competence would be an asset. Fluency in English is required. A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

SYSTEM DESIGN – DATACOM INFRASTRUCTURE

● We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Datacom Infrastructure. The objective is to define the system roadmap for the evolution of packet and circuit switched datacom in the network. The evolution of CDPD in relation to future scenarios and the needs of switching and transport for wideband on the radio access need to be incorporated.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant datacom knowledge (5 years+) with some telecom knowledge. Specific competencies in datacom architecture and protocols would be an asset.

Fluency in English is required.

A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

SYSTEM DESIGN – WIDEBAND/DATACOM SERVICES

● We are therefore looking for excellent candidates to expand our advanced system planning activities in the areas of Wideband/Datacom Services. The objective is to investigate concepts such as client/server architecture, electronic commerce and multi-media applications for the purpose of new wireless end-user services taking advantage future of wideband bearer capabilities.

Candidates are requested to have a Bachelors or Masters Degree in Engineering and significant computer network architecture, or Internet architectural knowledge (5 years+) with some telecom knowledge. Fluency in English is required. A moderate amount of travel will be required particularly to Montreal, Canada where our system provisioning organization is centred.

Contact: Jan Erik Andersson, phone: +46 8 404 2025, memo era.erajean or Tariq Rahman, phone: +46 8 404 8029, Memo era.eratara, Email Tariq.Rahman(a)era-a.ericsson.se Application: Ericsson Radio Systems AB, AH/H Anette Spångberg, 164 80 Stockholm, Sweden.

ERJ - Ericsson Toshiba Telecommunication Systems K.K

Ericsson is supplying the CMS30 systems for the PDC (Japanese cellular standard) network in Japan. Our customers networks are now handling more than 2.3 million mobile subscribers and are increasing rapidly. In addition to the tremendous growth, the network will also soon be added with our sophisticated AM based Intelligent Network. Our headquarters is situated in Shin Yokohama (near Tokyo) with regional offices spread around Japan.

To cope with the promising future, we have vacant positions, long term and short term, in both Sweden and different locations of Japan. Employment in Sweden includes possibilities for future assignments in Japan. We are looking for people from all over Ericsson to support us in this challenge.

If you are up to challenges you should not skip this opportunity. See you in Japan.

MSC/HLR SUPPORT ENGINEERS

● Main tasks: trouble report handling; participate in 24 hr emergency support; correction packages handling; support roll-outs and provide technical support (on-site/off-site).

You should have good AXE knowledge and at least 4 years field support experience in the MSC/ HLR areas. Experienced in CMS30 is an advantage. We work as a team. As part of our support team, you will be working together to solve problems on-site/off-site. Trouble shooting skills is mandatory. Good team spirit and customer focus are demanded.

Starting date: As soon as possible Location: Japan

Contact: Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Application: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

RADIO BASE STATIONS SUPPORT ENGINEERS

● Main tasks: trouble report handling; participate in 24 hr emergency support; correction packages handling; support roll-outs and provide technical support (on-site/off-site).

You should have good AXE and RBS knowledge and at least 4 years field support experience in the Radio Base Station area. Experienced in CMS30 is an advantage. We work as a team. As part of our support team, you will be working together to solve problems on-site/off-site. Trouble shooting skills is mandatory. Good team spirit and customer focus are demanded.

Starting date: As soon as possible Location: Japan

Contact: Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Application: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

APZ/IOG SUPPORT ENGINEERS

● Main tasks: trouble report handling; participate in 24 hr emergency support; correction packages handling; support roll-outs and provide technical support (on-site/off-site).

You should have at least 4 years field support experience in the APZ and IOG systems. Experienced in CMS30 is highly an advantage. We work as a team. As part of our support team, you will be working together to solve problems on-site/off-site. Trouble shooting skills is mandatory. Good team spirit and customer focus are demanded.

Starting date: As soon as possible Location: Japan

Contact: Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Applicaiton: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

IN EXPERT

● The responsibilities include on-site trouble-shooting, problem analysis, technical support of IN System Integration Testing on customer sites, technical consultation and communication with customers.

We require solid experience of IN and working experience within Ericsson.

Starting date: As soon as possible Location: Japan

Contact: Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Application: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

SMAS EXPERT

● The responsibilities include on-site trouble-shooting, problem analysis, technical support of IN System Integration Testing on customer sites, technical consultation and communication with customers. The work also includes installation and testing of SMAS SW and customer training.

We require solid experience of SMAS and working experience within Ericsson.

Starting date: As soon as possible Location: Japan

Contact: Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Application: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

IN IMPLEMENTATION AND TROUBLE SHOOTING

● You will work with integration, testing, software rollout and/or trouble shooting during the introduction of IN in Japan

This introduction will take place in the April-October timeframe. Both short and long term applications are welcome.

Starting date: As soon as possible Location: Japan

Contact: Ulf Sundberg, phone +81 45 475 0077, NRJ.ERJUFSG, Tony Bradshaw, phone +81 45 475 7848, NRJ.ERJANBR or Erik Gustafsson, phone +46 8 757 0356, ERA.ERAEGUN Application: Ericsson Radio Systems AB, J/OH Erik Gustafsson 164 80 Stockholm

We at EED/N in Nuremberg/Germany are working in research and development in the field of mobile radio communications. For our activities we are searching as soon as possible a

PATENT ENGINEER

● The emphasis of your tasks is the support of our technical departments in p atent matters. Besides patent searches this includes drafting, reviewing and applying pat ents. You will pro-actively motivate designers to transfer their ideas into patents and su pport them in formulating their ideas. Both the advice of our departments and the represe ntation of our company externally are interesting challenges.

For this key position we expect an engineer with Diploma or Master degree in the field of communication engineering. You should have at least two years of profession al experience in the field of intellectual property rights, preferably in telecommunicati ons or consumer electronics.

Beside of the mentioned solid technical basis we expect the ability to desc ribe things in a clear and comprehensible way -also of complicate technical content- and t o proceed faithfully during patent search. You should also be excellently skilled in communicating and presenting, be highly adaptable and be able to speak, read and write En glish fluently. Furthermore you have team ability and self-assertion.

If you find it a challenging task to build-up a patent office within a fast growing Ericsson site in Germany, please send your application with reference to ou r project number (see above) to

Application: R&D Centre Nuremberg, Radio Communication, Norbert Lechner, Human Resources, Dial: 0911/5217-111, Memo: EED.EEDNLE or R&D Centre Nuremberg, Radio Communication, Wolfgang Koch, Department Manager, Dial: 0911/5217-258, Memo: EED.EEDWKO.

The Research and Development Centre Nuremberg, Radio Communication is looki ng for a

CONFIGURATION MANAGER

● Your task will be to provide configuration management support to various pr ojects at Ericsson Eurolab Deutschland GmbH in Nuremberg/Germany.

You will need to work according to defined CM rules, which are based on the general Ericsson CM standards.

Following a comprehensive training period, you will be responsible for crea ting and maintaining project document databases, as well as defining and checking th e project documentation required on the projects. You will also be responsible for en suring correct version controlling of configuration items, their releasing and their deliv ery to other sites.

You should be a qualified computer scientist or an engineer with good knowl edge in Unix and software engineering. Experience using configuration managment systems (e.g. ClearCase), would be an advantage.

Application: R&D Centre Nuremberg, Radio Communication, Norbert Lechner, Human Resources, Dial: 0911/5217-111, Memo: EED.EEDNLE or R&D Centre Nuremberg, Radio Communication, Juergen Matthis, Group Leader, Dial: 0911/5217-334, Memo: EED.EEDJ-MA.

contact
Ericsson, HF/LME/I, Room 811023, S-126 25 Stockholm

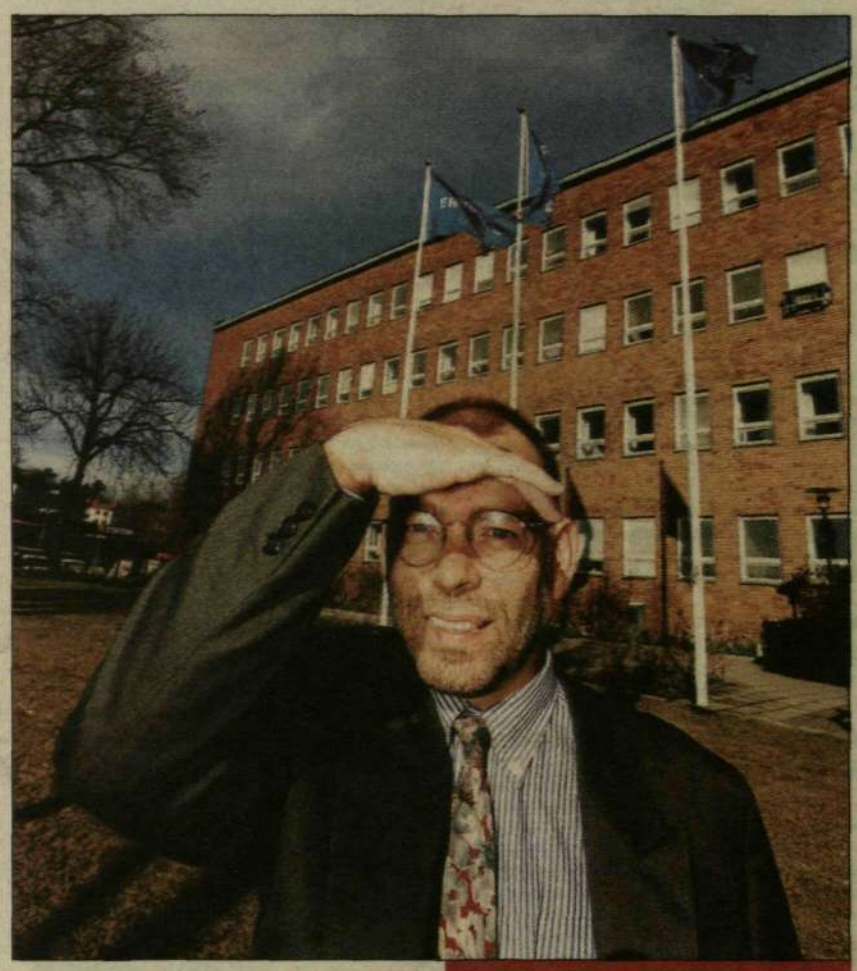
Magne left Norway to take on the world

After working for nine years at a technical university in Norway, Magne Fiske wound up with a new employer. He took up his new post at Ericsson's Norwegian company in 1988, and moved to Saudi Arabia a year or so later, as project manager for a major network project. He stayed there for two years.

He was accompanied by his family, consisting of his wife, Laila, and his daughter, Hedda. They are back in Trondheim again now, but Magne has continued to travel all over the world on new assignments.

Following his assignment in Saudi, he wound up in the Swedish organization, at Ericsson Business Networks, where he was involved in the tendering process which precedes network construction projects all over the world. He then had brief assignments in Quatar, China and another stint in Saudi. After that, Magne was given the task of setting up the local office in the UK, as part of a project for Libya.

Magne Fiske was paying a brief visit to Sweden when Contact interviewed him – on his way to a new project in Libya in a couple of days' time.



Magne Fiske, an Ericsson project manager, is on his way to Libya to work on another network construction project. Photo: PETER GUNNARS

Wanted to see the world

Why did Magne want to shoulder the responsibilities involved in being an Ericsson project manager? The simple explanation is that the right job turned up at the right time. He wanted to see the world and try something new at exactly the point when the Ericsson's Norwegian company contacted him. Magne has an open-minded attitude to most aspects of life and is interested in other countries. He enjoys the encounter with new cultures and feels that meeting new people is like a breath of fresh air.

In addition, Magne says that, primarily, project managers have to be able to improvise. They also have to be prepared to take responsibility.

"A project manager's job always involves handling emergencies to some extent. Even at the planning stage, you have to be able to take the unexpected into account. The project manager's job is to solve problems or ensure that they do not interfere with the work too much.

Magne is a Norwegian citizen and works for Ericsson on a freelance basis, but emotionally his ties with Ericsson couldn't be closer.

"You invest maximum commitment and time in Ericsson," he says, "and you get a lot in return."

Magne considers that Ericsson looks after its expatriate employees well. Possibly the company might do more to facilitate a meaningful social life for employees and their families outside working hours.

"It's a fact of life that the average age of people who are assigned as project managers and prepared to take on the job is rather high. At 43, I am a relatively young project manager. I think we focus too much on the individual project manager at Ericsson, and ignore the family aspect."

Making the best use of people

The network construction world is a male-dominated industry. You can almost count the number of women project managers on the fingers of one hand. Magne cannot name a single one. And in some cultures it wouldn't work, he reflects. Personally, his overseas projects have mostly been in the Middle East, where the time is not yet ripe for a female management style. In other parts of the world, though, it might work very well.

"It would probably be possible to facilitate recruitment by talking more about what you really have to do when you work on overseas projects, what is required, what is less important, and also questions concerning the position of families and solving practical problems. More potential project managers are definitely needed. This is a matter of making the best use of people, Magne says. "It's a good idea, as in my case, if you can get experience of a project from the inside first, as a member of the support organization."

When asked if you have to know about telecommunications, Magne said that this was not essential. The most important thing is the ability to organize. What about language skills? At the moment, Magne speaks Norwegian/Swedish and English fluently, and also some Italian, following frequent trips to Rome. So far, this has been sufficient.

What is Magne's next assignment going to be, after Libya? "That's one of the charms of this job – you never know." Magne wants to see more of China after his brief assignment there, and he would like to go back. Latin America would also be an interesting proposition – although this would mean improving his Spanish.

KARI MALMSTRÖM

end line

A real fine summer

Going back to work after a six-week vacation involves a certain amount of anguish – to put it mildly! You normally need at least a couple of weeks' running-in time before you're working at full speed again. But a gentle start is hardly feasible if you're editing Contact and have to put the magazine together in a week! And the major rebuilding and extension project which is under way in our editorial offices was an additional negative feature. It's no fun working in the middle of a building site...

Thoughts like this were on my mind as my vacation started to come to a close. But things brightened up considerably on July 24 when I tuned into a Swedish radio channel one afternoon, interrupting my temporary repose on a Danish beach, and heard that Ericsson had achieved "higher earnings than expected". A higher share price after publication of the financial statement is an unusual event!

And then I reflected on all my diligent colleagues who had sacrificed part of their summer holidays to ensure publication of this report earlier than in previous years. I recalled that it is fun to work in a company which is so successful in the toughest market of them all, and that it would be exciting to see how much progress had been made in remodeling our offices when I returned to active duty.

And then it was August 4, and time to get started again. The new premises were fantastic. Our property company had clearly organized things very professionally. Those who worked right through the most intensive period of partition-demolition and hammering confirmed that they had soon got used to performing their tasks smoothly in the midst of such apparent confusion, and that our communications technology had continued to operate satisfactorily in this arduous environment.

And then we heard that Ericsson has overtaken Nokia in mobile telephone sales and become the market leader. This is a prodigious achievement, after only a few years of serious efforts in this market! Later I went to the staff retail outlet to buy a wireless phone to replace the equipment which succumbed when my home was struck by lightning in mid-July. I walked out with a Dect Home Station, despite my views on wireless phones at work. This is a really fine product – according to my family a Rolls Royce in comparison with the traditional wireless phone it replaces.

I take my hat off to those who designed and developed this product. They deserve to be as successful in this market as the company has been in digital mobile phones. There's every prospect that they will chalk up another success for Ericsson, since this product will be sold with the marketing expertise built up by Mobile Telephones and Terminals.

Vacations are fine, but going back to work is not so bad either.

LARS-GÖRAN HEDIN

contact

in depth

THEME SUPPLEMENT TO CONTACT
NUMBER 11 1997

With a watchful eye on the world around us

Theme: Ericsson's competition in the marketplace

Business intelligence – not espionage

What you are holding in your hand is Contact's theme issue about Ericsson's competitors. It doesn't contain a bunch of secrets from extensive industrial espionage. Nor is James Bond the role model for Ericsson's business intelligence personnel. Even though it is an interesting job, it isn't nearly as violent and full of intrigues as a secret agent's. It's more a question of analyzing material from many different sources.

Our objective with this theme issue is to provide a good overview of the companies we are competing with today and the types of companies we can expect to enter the competition in the future.

The editorial board hopes that this theme issue will increase general awareness of the reality facing Ericsson in the marketplace.

Due to space limitations, this is obviously not an exhaustive report on all of Ericsson's competitors in all markets, but it may give some insight into the major competitive issues.

For those who want to learn more, there is lots to read in Ericsson's own database for market surveillance. Read more about it on the back cover.

We hope that your daily work will become more interesting knowing which competitors are working on the same thing. For every individual product or service Ericsson offers, there is almost always someone else producing the same thing – and not always to an inferior quality. In order to ensure Ericsson's future existence and maintain its leading position, it's essential that we partake in the competition and produce superior results. The more we know about the other players, the better.

PATRIK LINDÉN
THEME EDITOR

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On the alert for future competition

BY: PATRIK LINDÉN

Recent changes in the telecommunications industry, characterized by ongoing convergence with the computer industry and market deregulation, is creating a growing need for genuine understanding of what is happening and the companies Ericsson competes with in today's market. This type of insight is important to all Ericsson employees. Ericsson's business intelligence personnel collect and analyze information every day. It is important they stay one step ahead of current developments, recognizing and interpreting market trends from Ericsson's perspective. It is essential, however, that we all understand the fundamental concepts in order to comprehend the realities of Ericsson's market and business operations.

Business intelligence concerns all of us

"Business intelligence is a mean of monitoring the industry and ongoing changes, a tool for drawing conclusions and remaining foresighted," explains Gabriel Anderbjörk, who coordinates Ericsson's business intelligence operations. The ability to analyze and draw conclusions based on Ericsson's perspectives is particularly important, he says. Information has to be processed constantly and placed in a perspective that provides added value. Therein lies the secret of good business intelligence, a key term in today's business world.

"In battlefield conditions, no commander would send an entire company over a ridge to see what's on the other side and then determine what action should be taken. The same thing applies to a business situation." Mr. Anderbjörk continues. "Comprehensive knowledge of one's reality is essential," he says.

It's important that all of Ericsson's telecommunications and product analysts stay abreast what's happening in the industry today and which new trends are emerging, but very little is gained if the information does not reach the decision-makers and other persons more immediately affected by their observations and analyses.

Gabriel Anderbjörk (right) and Raitis Sedlenieks are responsible for the coordination of market surveillance at the corporate level.

Ericsson's success is dependent on the knowledge of all employees and their insights into competitive conditions and the industry in general. Their know-how and overall awareness makes it easier for them to work in their everyday jobs and to enhance their understanding of how their efforts fit into overall business operations.

"Basic knowledge makes it easier to request extra help when it's needed," says Raitis Sedlenieks, who works with business intelligence in cooperation with Gabriel Anderbjörk at the corporate level.

"The situation was completely different as recently as five years ago," Mr. Sedlenieks says. "Ericsson's largest business transactions were conducted with large national and often Government-owned operators. Business intelligence was less complicated in those days."

The importance of recognizing new market trends has grown significantly. The revolution that took place in the computer industry during the 1980s, highlighted by the penetration of PCs, is now sweeping through the telecommunications industry. In addition, the telecommunications and computer industries are affected very strongly today by Internet technologies, which are changing the ground rules in both industries. Gabriel Anderbjörk would like to see more people working in business intelligence and market surveillance to increase overall awareness throughout Ericsson.

"The entire industry is characterized today by change, and our competitors can no longer be counted on one hand. The need for increased coordination is greater than ever. Today, a large number of analysts work in various parts of the organization, but we need to strengthen the joint functions. By that I don't mean we need more people working in Stockholm, but rather more people are needed to concentrate exclusively on support functions for all Ericsson units and provide market surveillance services where they are needed most critically."

Ericsson Business Information Center (EBIC) was established to simplify routines and enable more people to avail themselves of the information gathered by Ericsson's analysts and business intelligence personnel. EBIC is a Web site-adapted database that contains a host of pertinent information concerning the telecommunications industry, all of which can be accessed at the following address: http://bic.ericsson.se (refer also to a separate article on the back page of this supplement). ■

Illustration: MAGNUS BARD

Reality is subject to change. Not many years ago, the rule of thumb called for one telecom operator per country, most often a government-owned operator. Competitors were few in number and most often large in size. Today, it's impossible for anybody to predict which companies will become tomorrow's competitors. The only thing that can be said with any degree of certainty is that new market players will emerge from sources and areas completely different from Ericsson's traditional customer base. And they will be capable of achieving rapid and very significant growth.

A world of new competitors

BY: LENA WIDEGREN

Like most other traditional telecom suppliers, Ericsson today has to cope with a broad range of new competitors. They are companies that want to capitalize on business potential created by the convergence of data and telecommunications. New market players are characterized by their speed, flexibility and close contact with customers, in addition to a completely new business culture, compared with conventional modes of operations nurtured by the "old" telecommunications industry.

Most of the companies that have quickly become major forces have achieved rapid growth through sales of products, services and system solutions for data communications, emerging from the American computer industry – so-called box vendors with their roots in the PC sector. They developed comprehensive know-how in consumer electronics and went after the market based on their specials skills. They know how to act with the flexibility demanded by the industry's new customers, for example, operators with limited technical organizations and strong demands on a rapid return from their capital investments.

The number of new operators is growing constantly, and they usually – if not always – call on suppliers able to deliver and install communications systems quickly. Preferably within a matter of weeks. These new customers also want the freedom to specify which products they want, and the suppliers that understand their needs will be winners in the long-term perspective.

"Neither time nor resources are available today that will allow technology to control product development, whereby suppliers first develop and manufacture a product and then try to sell it. Instead, consumer-driven solutions create today's business opportunities, and traditional telecom suppliers like Ericsson have to become more proficient under current market conditions," says Bernt Ericson, Senior Vice President, Corporate Technology.

Interest in the Internet is a prime factor in today's market, and new opportunities generated by Internet technologies are propelling the industry's development. The entire industry is watching trends in the American market, where the communications industry has assumed completely new forms within a few scant years, based primarily on the growing number of Internet users.

Strong demand for Internet access, the lure of new technology and deregulation of the American telecommunications monopoly has made it possible for even small companies to establish successful business operations. A limited product range is usually all it takes to achieve rapid growth and capture significant market shares. Many companies in the U.S. have focused on special niche markets and achieved considerable success, for example by specializing in routers, modems, ATM exchanges or network hubs – equipment needed to build and upgrade data networks and provide subscribers with access to the Internet. Various forms of new constellations have emerged from this flora of specialist companies through mergers, acquisitions and partnership alliances. These new constellations represent Ericsson's new competition, what we often call the market's new players.

Today, the eyes of the entire data and telecommunications industry are concentrated on these new American companies in an effort to learn

Small becomes large very quickly in today's telecom market

more about data communications and Internet protocol technologies and examine the business success of the market's new players. Companies like Ericsson, which belongs to the cadre of traditional telecom suppliers, have a particularly keen interest in keeping a watchful eye or two on the market's new players.

"American data communications companies are model pioneers, offering prime examples of how new technologies can be used in successful business operations. Ericsson is fairly accomplished in detecting signs of new market trends, but we also need an organization that is fleet of foot, an organization able to recognize new signs and react accordingly. In this respect, we can learn a great deal from the market's new players," Bernt Ericsson continues.

By tradition, the computer industry that shaped today's new players has always been exposed to extremely tough competition, a virtual mass market situation. Tough market conditions have been drilled into the culture of new market players and their ability to cope in today's business world, to focus sharply on the business at hand and aggressively engage in a continuous struggle for market shares. Their business culture also refrains from operations with excessively long time perspectives, working instead with limited personnel and financial resources, placing even greater focus on speed and flexibility. The characteristics of today's new market players will also help them penetrate the telecommunications industry and try to create new skills and know-how, primarily through acquisitions of small niche companies, but also by establishing close customer relations and programs of cooperation with business partners. Their objective, of course, is to take the lead over companies like Ericsson by supplying customers with total solutions based on data communications techniques.

Most analysts and market observers believe there are only a few companies with the potential to eventually provide total solutions for transmissions of voice, data and multimedia traffic via data networks. Cisco Systems is one. Many observers believe Cisco Systems is in a league of its own, with the capacity to dominate for a long time to come.

The company specializes in routers, a product area that comprises a combination of software and hardware used to facilitate and control communications between different networks. Cisco Systems has captured a highly impressive 76 percent market share in the routers sector. Its success is attributable to a flexible organization, with no more than 10,000 employees despite its strong market presence, and the ability to discover and acquire small companies that contribute important skills and know-how to Cisco's quest for a complete product portfolio.

On the other hand, Cisco has only limited experience as a supplier of equipment for real public applications requiring services that are accessible around the clock to millions of users – applications like telephony, for example. Cisco has also concentrated on sales through a variety of national partners. The company's own sales force is limited, accordingly, which poses a disadvantage in serious negotiations with operators interested in complex networks.

To face the challenge of competition from Cisco and other new players, the telecommunications industry will have to adopt new schools of thought. The new philosophies are reflected in Ericsson by changes in its Infocom Systems business area's production, such as outsourcing and sales of former production plants in various parts of the world. Stronger focus has also been placed on the creation of flexible operations able to change course and act as quickly as the industry in which we operate. ■

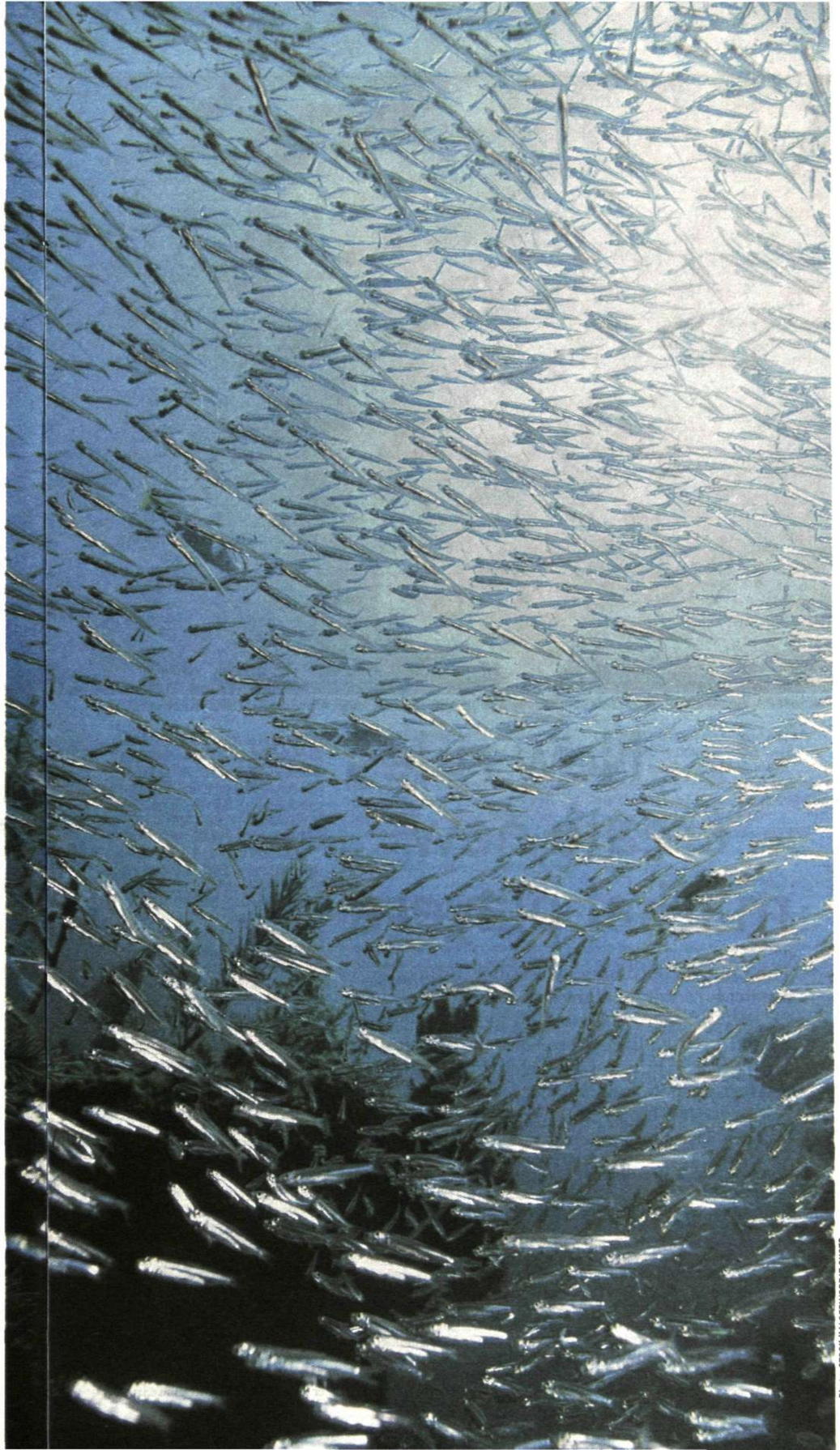


Photo: STOCK IMAGERY/GREAT SHOTS

Philips – a newcomer investing heavily

Philips, the Dutch electronics giant, plans to capture a position among the top three manufacturers of mobile telephones by the year 2000. Its first mobile telephone was not introduced until last year. In other words, Philips has set lofty and highly ambitious goals for its communication products division and the consumer products market.

Philips launched its latest model called Genie this summer. One of the smallest mobile telephones on the market, Genie has all the features expected of a new telephone today, as well as other features such as voice control for 10 preset telephone numbers.

The Dutch company is attacking the market from a somewhat different angle than most of its large competitors. Philips has excellent skills in consumer electronics, with well-established and highly functional distribution channels. Its specific mobile telephone expertise has been developed very quickly, starting in 1995. Most competitors have based their operations on know-how in the field of mobile telephony and lateracquired knowledge of the consumer market and distribution channels.

To increase its skills and strength, the Philips division for mobile telephones and other communication products such as cordless telephones will merge this autumn with the corresponding division of Lucent Technologies of the U.S.

Philips will be the majority shareholder in the new company and manage products made by both companies for the segment comprising mobile telephones, pagers, tabletop and cordless telephones, answering machines and other products. All products will be marketed under the Philips name. The company will be registered in the U.S. this autumn.

PATRIK LINDÉN

It's becoming difficult to distinguish the important trends and determine which companies will become the major players in tomorrow's market. A large number of companies are striving to establish footholds as today's data and telecommunications industries converge to form a single sector. Photo: MINDEN PICTURES/GREAT SHOTS

BY NILS SUNDSTRÖM

New rules create new market players

The future is becoming increasingly difficult to predict for traditional telecom companies. Parallel with deregulation, new technologies and shorter product life cycles, increasing demands are placed on business intelligence. A balanced product portfolio and alliances with other companies are two important ingredients for success in today's new infocom industry.

The growing need for multimedia services is erasing the boundaries between telecommunication and computer technology. At the same time, an increasing number of specialized companies seize opportunities to find niche markets, open systems and deregulation are paving the way for a few dominant companies to capture individual product areas in a "winner take all" market.

"The computer market has been characterized by this trend since PCs were introduced in 1981," says Mikael Edholm, who directs Ericsson Corporate Business Development in Menlo Park, California.

Mikael Edholm has studied computer industry trends for the past several years, and he believes the industry's ground rules and regulations were changed forever when IBM decided to focus its development on an open technical platform. The decision created a market for third party development and provided small companies with a chance to develop circuit boards and software.

"Since the decision, Intel and Microsoft have succeeded in their respective niches, knocking out one company after another by introducing new applications for their own products," explains Mr. Edholm, who now sees the same pattern of change in the telecommunications industry.

"In the past, there was no common platform to lean against in telecommunications. Today, we have arrived at the next platform shift. With expansion of the Internet and introduction of the World Wide Web, data and telecommunications have started to converge, making it possible for many new players to penetrate the market," he continues.

MORE INTELLIGENT TERMINALS, regardless of their purpose, have enabled data and telecommunications equipment to communicate with each other. The convergence of data and telecommunications has now reached a point at which de facto standards have the upper hand. The market, once driven by technology, is becoming a sector controlled and driven by applications.

"The current trend is placing new demands on Ericsson. We have to shift our focus from technology and develop a better understanding of consumer needs, values and attitudes," says Mikael Edholm.

The access network is progressing strongly toward wireless communications, while a part of it demands real time and, in the future, large computer capacity will be transmitted via satellites, cable TV networks and optical fiber cable.

In parallel with traditional mobile telephony, new markets are emerging not based on communications between persons, but rather between persons and appliances as well as appliances and appliances.

"We will see solutions in which voice control will enable computers to read e-mail messages and other features that may include a passenger car making a telephone call to announce, "hello, I've been stolen and I'm now parked at ..." Other wireless communications will take place unnoticed, for example when an automobile contacts a road toll and the toll is automatically transferred from your account, or the cash register that reports sales to the warehouse."

THE PLAYERS, SERVICES AND PRODucts that will emerge as major forces in the future will probably vary from one market to another. A trend in the U.S. today is highlighted by media giants Disney and Time Warner, which are both becoming more dominant by taking control of distribution channels.

Disney's acquisition of Capital Cities ABC is a prime example of how a single company is able to cover several stages of the value chain.

The software industry is following the same trend. For the past year, Microsoft has been providing a combined TV channel and Web site, MSNBC, through a joint venture company owned in cooperation with NBC. Microsoft has also acquired Comcast, the fourth largest cable TV company in the U.S.

"In Europe, which is characterized by greater cultural diversity, the infocom sector is controlled for all intents and purposes by operators with access to the distribution networks," Mikael Edholm explains.

Liberalization of the telecom sector, however, will probably produce trends similar to those in the American market. Bertelsmann of Germany is a part owner of America Online, and plans to acquire its competitor, CompuServe, which clearly points toward the American "winner take all" approach.

ASIA IS ANOTHER REGION WITH cultural differences, but with a less established infrastructure. Future trends in Asian markets point toward companies much stronger in consumer products manufacturing, according to Mikael Edholm, who also foresees different criteria for success, depending on which players become the strongest.

A variety of future scenarios were placed in sharp focus in the study entitled "2005 – Ericsson Entering the 21st Century," which Mikael Edholm helped to produce. Regardless of which path we take in the future, he sees some fundamental conditions for success. Strong pressure on hardware prices is unavoidable. Annual price cuts of 30 percent or more have been the established norm in the computer industry for several years. The trend toward open systems in telecommunications will undoubtedly create the same effect.

BEING "FIRST ON THE MARKET" might become more important than "best on the market." Standards will not be established by committees; products will become standards based on their sales success.

"The best way we can protect our position is to maintain a balanced product portfolio, be prepared for new products and dominate certain market segments. All of this requires active business intelligence and maximum freedom of action.

"It's extremely obvious that new competitive conditions will also require several different types of cooperation programs of various intensity and levels," says Mikael Edholm.

Before joining international SBC Warburg as a financial analyst, Per Lindberg worked for Ericsson as a strategic planner for five years. In today's changing world of telecommunications, Mr. Lindberg is convinced that partnership will become an increasingly powerful tool that will enable manufacturers to offer new total solutions – and rapidly develop new products.

"A basic prerequisite for success is to open your own systems to products made by other manufacturers," says Per Lindberg, who also sees potential for several new niche players to establish business operations in various market segments.

Changes affect operators first, but are also soon reflected in the operations of their suppliers.

"The current trend in services is toward more high-speed data that requires new network solutions and structures. The volumes of operators are increasing, but competition is also creating greater pressure on margins. Eventually, it will necessitate comprehensive rationalization measures in the areas of purchasing and personnel," Per Lindberg continues.

HE BELIEVES ERICSSON'S KNOWLedge of consumer products and systems is the strong point on which the company should build its future operations.

"At the same time, it's also important to exercise influence over market trends, the process of intertwining the Internet with telecommunications networks and future standards in mobile telephony. Shorter life cycles for products will also place more stringent demands on planning, logistics and marketing. It will create new requirements for flexibility and knowledge of market needs, recognizing the right time to launch new products and an awareness of where competing companies are situated in the market." ■

Qualcomm has become an established contender

■ San Diego-based Qualcomm is one of the strong contenders in the mobile telephone market. The company concentrates on development and production based on the IS-95 digital CDMA standard. Future projects will be focused on broadband solutions and satellite systems. Qualcomm is a prime example of how competing companies can emerge from virtually nowhere and establish a strong foothold in the marketplace.

Qualcomm, however, is a small company compared with the market's large mobile telephone manufacturers. Its share of total wireless communications equipment sales is estimated at about one percent, but through lobbying, its presence in the media and a strong patent portfolio, Qualcomm has captured market shares in a relatively short period of time.

Founded in 1985, its definitive breakthrough in the U.S. came in 1996 when Qualcomm was awarded several large contracts for systems and terminals based on the IS-95 standard. The company's sales then surged by 111 percent to a total of USD 814 million. In two years, the number of employees has increased from 3,000 to 8,000, and the company is presently valued at USD 3.5 billion on the American Stock Exchange.

In addition to mobile telephony, Qualcomm has been successful with its e-mail system called Eudora, a software program that has some 18 million users, as well as the Omnitracs satellite system.

Qualcomm's future hinges largely upon how much of the IS-95 market the company can capture, especially in competition with Lucent, Motorola and Nokia. Today there are a total of about 2 million IS-95 subscribers worldwide, mainly in South Korea, the U.S. and Hong Kong.

Among Qualcomm's weaknesses are its dependency on IS-95, a weak global presence, a small customer base and limited possibilites to finance various projects, compared with the big players in the league.

Nils Sundström

6 Ericsson's classic competitors

A great deal of interest in the future of telecommunications is focused today on new companies trying to penetrate the market. Like Ericsson, however, the traditional companies that have conducted business operations for decades will not relinquish their market shares without a fight. As the market climate toughens, it's important for Ericsson to know the competition. The companies with market experience will retain their positions as important players.

Nokia – tough competitor in mobile telephony

The ability to understand end-users – the subscribers – and an image as one of the market's technical leaders in mobile telephony. We're referring to Nokia, one of Ericsson's major competitors, particularly in mobile telephony, but also in the area of systems and telephones.

Nokia, founded in Tampere, Finland in 1865, has its roots in the forestry sector. The company's name comes from the Nokia River that flows past Tampere. Through the years, Nokia was transformed into an industrial conglomerate and, in the early 1980s, the Finnish company strengthened its position in telecommunications and consumer electronics.

Today, Nokia has more than 33,000 employees in 45 countries. Sales in 1996 totaled FIM 39.9 billion (USD 7.2 billion).

Business operations are divided into two business groups: Nokia Telecommunications and Nokia Mobile Phones. The organization also includes two separate divisions: Nokia Multimedia Network Terminals and Nokia Industrial Electronics and a corporate unit for research, the Nokia Research Center.

Nokia Telecommunications develops and manufactures equipment for cellular and fixed networks. In the area of GSM/DCS, Nokia is the world's second largest company, with deliveries to more than 58 operators in 32 countries. Strong focus is placed today on operations in the U.S., Latin America and the Asia-Pacific region. Nokia's telephone exchange is called DX 200, which may be most readily likened to Ericsson's AXE. One weakness of the DX 200 is that it's far too small to meet the needs of large operators, but the development of a new exchange is now in progress.

Nokia is not only the name of a Finnish telecom company, it's also the name of a town in southern Finland.

Nokia is today's market leader in mobile data systems.

As indicated by its name, Nokia Mobile Phones develops mobile telephones and ranks as the leader in Europe and the world's second largest manufacturer of mobile phones. Telephone operations have been profitable from the start, while system operations that showed poor profitability in the past are now reporting better results.

Nokia Multimedia Network Terminals works with terminals for digital satellite and cable systems for interactive multimedia applications, with particular focus on the Internet, among other areas. Nokia Industrial Electronics develops and manufactures sound systems and speakers for cars as well as TV and hi-fi manufacturers, in addition to battery chargers for mobile telephones.

Nokia is particularly adept at listening to customers and trying to understand their business opportunities and problems. Another one of Nokia's strengths is the image it has nurtured as a technically innovative company. Nokia is quick to announce new products and solutions, sometimes even before development work is finished. The company has only limited bureaucratic tendencies, and the personal responsibility of its individual employees is widespread. Another strength is the Finnish company's highly functional internal communications structure, which declares its goals and strategies to all employees. Jorma Ollila, President and CEO of Nokia, sets the positive tone that prevails throughout his organization.

The comprehensive personal responsibility of Nokia's employees is not just a strength, however; it also represents a minus for the company, which is characterized by high personnel turnover that, at times, makes it difficult to convince qualified employees to stay with the company.

Nokia is considered a small company in the telecommunications industry and, as opposed to the largest market players, it cannot afford to make mistakes. The question today is how long Nokia can stay on top without joining forces with another company. The rumor mill mentions Microsoft as a leading candidate.

Another challenge facing the Finnish company is a pending decision over its future focus on the development of systems or telephones, and which markets Nokia should cultivate.

Nokia may be small in stature among telecom suppliers, but it's a tough company and a major competitor in the field of mobile telephony.

GUNILLA TAMM

Lucent – newcomer with old traditions

Lucent Technologies is only a few years old, but the company is rich in traditions dating back to Alexander Graham Bell, the father of telephony. Lucent, which was established when the American telephone giant AT&T (American Telephone and Telegraph) was divided into three units in 1995, traces its history 127 years back in time.

Today's Lucent Technologies is AT&T's former system and technology units. In 1995, AT&T separated its operator sector from former production units. When Lucent shares were sold on the New York Stock Exchange in 1996, it was the largest stock sale in the history of Wall Street. AT&T still retains a substantial ownership share in Lucent, however.

Annual sales invoiced by Lucent Technologies amount to USD 23 billion, with 124,000 employees in all parts of the world, the majority of whom work in the U.S. domestic market.

Bell Laboratories is the name of Lucent's research and development department. Researchers associated with Lucent have been awarded seven Nobel Prizes, and Bell Laboratories is credited with designing the UNIX operating system and inventing the first communications satellite. R&D activities are conducted in the U.S. and 13 other countries in all parts of the world. Bell Laboratories alone reports annual investments of USD 2 billion (1996). In addition to its R&D unit, Lucent is divided into Business Communication Systems, Microelectronics and Network Systems. Starting this autumn, consumer products will be managed by a joint venture company owned by Lucent and Philips. The products will be marketed under the Philips brand name. Lucent has manufactured a very large percentage of all telephones now used in the U.S.

Network Systems is by far the largest section of Lucent Technologies. It is larger than all other Lucent divisions combined.

Lucent develops and markets business communication systems that include Call Center solutions and voice mail systems as well as business exchanges. It also works with integration in the converging areas between data and telephony, an area that includes cordless office telephones similar to Ericsson's cordless DECT telephones.

The microelectronics operations of Lucent Technologies have particular significance within the area of GSM components.

Network Systems sells traditional infrastructures on the world market for both wired and mobile telephony.

To describe in one sentence what Lucent Technologies does, we cite the company's own slogan, used extensively in American television commercials: "We make the things that make communications work."

PATRIK LINDÉN

Motorola – a pioneer in mobile telecommunications

Mobile telecommunications has been an important part of operations conducted by the American electronics company, Motorola, for many years. In the early 1970s, work was initiated that eventually propelled Motorola to its present position as the world's leading supplier of mobile telephones. In its next large project, Motorola plans to concentrate on mobile telecommunications via satellite.

Founded in Chicago by Paul Galvin in 1928, Motorola's first product was a "battery eliminator" that made it possible for radios to operate on household electricity instead of batteries.

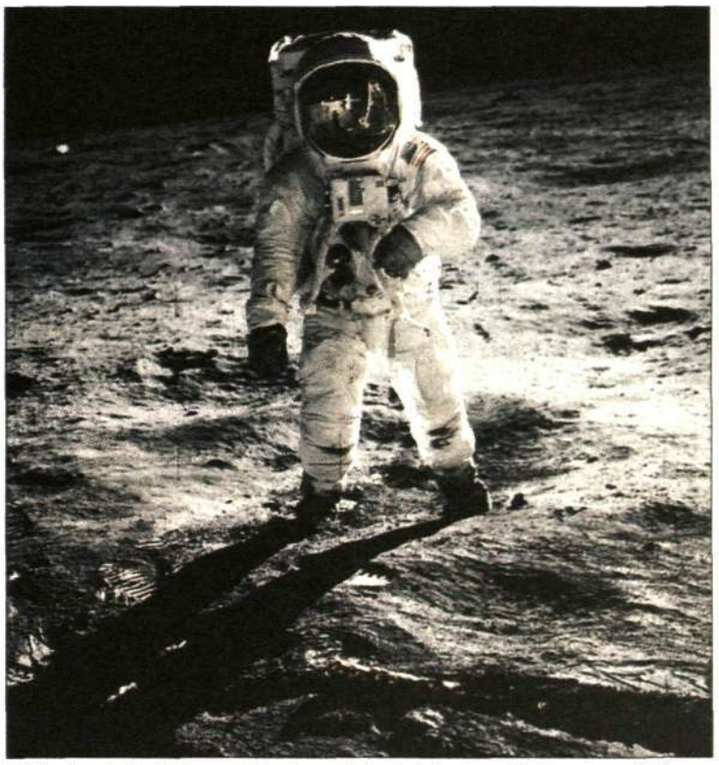
During the 1930s, Motorola started to manufacture its own radios with a product range that included receivers for home use and communication equipment for American military defense applications. When Paul Galvin died in 1959, Motorola had become the American market's leading supplier. Its customers have included the American space program under NASA and, when Neil Armstrong took his now-famous lunar "giant step for mankind" on July 21, 1969, his words were transmitted to earth via a transponder manufactured by Motorola.

Motorola today calls itself "one of the world's leading suppliers of wireless communications, semiconductors and advanced electronic systems and components." Sales invoiced in 1996 amounted to USD 27 billion, and Christopher Galvin, Motorola's President, CEO and grandson of Paul Galvin, heads a company with 142,000 employees in 1996. Six business units conduct operations in areas focused on mobile telecommunications, semiconductors, pagers and modems for wireless data communications, communication radio, vehicular electronics and space technology.

General Systems is a business area that develops mobile telephones and base stations for mobile networks. Based in Libertyville, Illinois, General Systems accounts for one-third of Motorola's total sales.

The American company's concentration on mobile telephony was started in the early 1970s, and Motorola launched the first prototype of a functional mobile telephone in 1973.

Today, Motorola is the world's leading manufacturer of mobile telephones. Its portfolio includes products for virtually every standard on the market. Its base stations are used by operators in more than 80 countries, including Comviq of Sweden.



Neil Armstrong's classic "one small step for man, but a giant step for mankind" was transmitted to earth via a transponder made by Motorola. Photo: PICA PRESSFOTO

Motorola's investments in future mobile telephone operations have taken the American company back into space. As a member of Iridium, a consortium comprising telecommunications companies, Motorola is taking part in the construction of a global network for data and telecommunications via satellite.

When Iridium is placed in commercial operations next year, a total of 66 satellites will form a network that covers virtually all parts of the earth. The technique may be likened to today's mobile telephony, but calls will be linked via satellite rather than land-based stations.

NICLAS HENNINGSSON

Nortel – a Canadian with proud traditions

Nortel, more formally known as Northern Telecom Ltd., has its headquarters in Brampton, in the Canadian Province of Ontario. About 3,500 employees work at the new Brampton complex. Nortel has 21,000 employees working throughout Canada, representing approximately one-third of its 68,000 total employees in 150 countries worldwide. Jean C. Monty is President and CEO of Nortel.

In 1995, Nortel celebrated the 100th anniversary of its founding, but the Canadian company's roots can be traced even farther back in time. In fact all the way to Alexander Graham Bell, who invented the first telephone in the Ontario home of his parents in 1874. He was granted a U.S. patent in 1876 and Canadian patent protection in 1877.

Alexander Graham Bell signed three-fourths of the Canadian patent rights over to his father, who sold it two years later to National Bell in the U.S., the forerunner to today's AT&T. The Canadian Bell company was developed under the protection of National Bell's patent rights before becoming an independent company in 1895, when Nortel began to take shape.

Nortel plays an important role in Canadian industry. One of every three engineering graduates in Canada is recruited by the telecom giant. Nortel also accounts for about 20 percent of Canada's total capital investments in research and development. The center for its global R&D activities in Ottawa has about 10,000 employees. Global development work is conducted at 38 sites in 16 countries.

Nortel is a dominant player in North American markets, which account for 65 percent of total revenues. Canada accounted for 11 percent of Nortel's invoicing in 1996, which totaled USD 12.8 billion. A substantial percentage of remaining Nortel sales were booked in Canada's neighboring American market south of the border.

All four of Nortel's business areas have their headquarters in the U.S. Enterprise Networks and Wireless Networks are based in Richardson, Texas. Enterprise Networks, Nortel's business area for business communications, is spearheaded by its Meridian system, which battles for market leadership with Lucent products and Ericsson's MD 110 in many markets. Wireless Networks pulls the strings for Nortel's operations in the field of mobile telephony. The Canadian company's mobile telephone operations have encountered stiff competition in its strong markets, and Nortel is still waiting for its definitive market breakthrough.

Broadband Networks is headquartered in Atlanta, Georgia. The business unit works primarily with transport networks, SONET for example, for the American market and SDH for other world markets.

Public Carrier Networks, the Canadian company's fourth business area, is based in Triangle Park, North Carolina, with operations concentrated on public telephony. Nortel's product portfolio includes its DMS-10 and DMS Super-Node system platforms for digital exchange technologies. The company has installed more than 100 million lines in all parts of the world.

Nortel is working hard today in a determined effort to become a leading global supplier. Its greatest challenge is to become less dependent on North American markets. The company is making aggressive investments in Europe, Asia and Latin America, and it conducts business operations on all continents. Production plants are situated in a large number of countries, with joint venture companies in China, for example, as well as several strategic partnerships and alliances.

Technologically, Nortel is making substantial investments in the field of information communications. Nortel likes to compare itself with companies in the computer and systems integration industries, rather than traditional telecom companies. Its Magellan system provides the Canadian company with a strong product portfolio in the ATM and multimedia sector.

For marketing purposes, Nortel is divided into Nortel North America, Northern Telecom Europe, based in London, and Northern Telecom Asia/Pacific, based in Tokyo. The company is also represented locally in a large number of other countries and has a well-developed distribution network for packaged solutions. In new markets, which include many European countries, Nortel has successfully established operations as a supplier to new operators.

KARI MALMSTRÖM

Siemens in 189 of the world's 193 countries

Siemens is one of Germany's largest industrial groups and a world leader in electronics and electrical engineering. According to its own information, the German company is represented in 189 of the world's 193 countries. The head office of Siemens is situated in a renaissance palace at Wittelsbacherplatz in Munich, from where Dr. Heinrich von Pierer has directed the company's operations since 1992. Sales in 1996 amounted to DEM 94.2 billion (USD 51 bn), an increase of 6 percent over revenues in the preceding year. Earnings rose 20 percent in 1996.

Of the company's 379,000 employees, 203,000 work in Germany, the Siemens Group's dominant market, accounting for sales of DEM 36.4 billion (USD 19.6 bn), or nearly 40 percent.

Siemens has its sights clearly set on increasing market shares abroad, with the objective to double its share in Asia and achieve strong growth in North and South America.

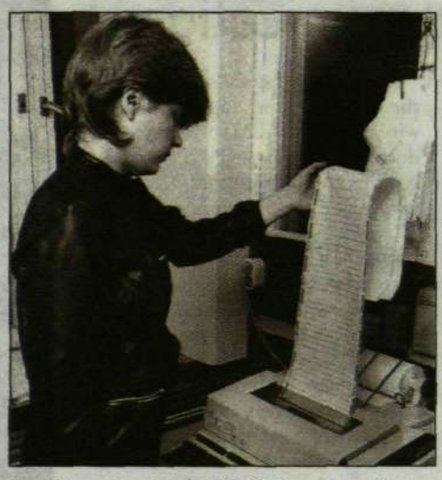
Of all Ericsson competitors, none is as multifaceted as Siemens. Its products range from light bulbs, stoves, electric locomotives and traffic signal systems to medical equipment, energy supply systems and last, but not least, telecommunications equipment and computers. Operations are divided into 16 business units. Sales attributable to business operations that may be considered in competition with Ericsson, in the broadest sense of the word, amount to less than Ericsson's sales, however.

About 8 percent of Siemens' group sales is invested in research and development activities, which employ 44,500 persons, with nearly one-third working outside Germany. The lion's share of R&D activities is focused on communications, information technology and semiconductor operations as well as medical fields within Siemens' group operations.

Siemens is celebrating its 150th anniversary this year. The company's saga began with its presentation of an optical telegraph that showed letters of the alphabet rather than signaling the Morse code. The telegraph was designed in 1847 by 31-year old Lieutenant Werner von Siemens, who later founded Siemens und Halske in Berlin with his partner Johann Georg Halske.

With the invention of the dynamo in 1866, Siemens laid the foundation for high-voltage power technology, which signaled the start of a new industrial epoch and paved the way for the German company's prosperity and expansion. Siemens was the company behind the world's first electric locomotive introduced in Berlin in 1879. The teletype printer introduced in 1928 was another Siemens innovation.

During the 20th century, Siemens has recorded very strong growth in the field of telecommunications. Its Public Communications Networks and Private Communications Systems are the main Siemens business units in competition with Ericsson in world markets. Defense Electronics, another Siemens business unit, and Siemens Nixdorf also lock horns with Ericsson's own business areas.



The teletype printer, invented in 1928, is one of many innovations from Siemens. Photo: VICTOR LENSON BROTT

Public Communications Networks is concentrated on traditional public telephony, including exchange technologies, transport networks, broadband and access solutions as well as mobile telephony. Siemens has been the supplier of choice for 230 wired and 70 mobile operators in all parts of the world. For many years, Siemens has had a virtual monopoly in its domestic market, with Deutsche Telekom as the main customer. Next year, however, digitization of the German telecom network will be almost completed, in parallel with deregulation of the market. Efforts in foreign markets will therefore assume even greater importance.

Private Communications Systems works with business communications, with the Hicom platform as its primary product line. The business unit also includes Defense Electronics, a separate unit that manufactures and markets surveillance, control and security systems for military defense and other applications.

Siemens Nixdorf is the largest manufacturer of computers in Europe, but the business unit suffers from profitability problems. Based on its platform, however, the company has positioned itself as the industry's leader in the environmental sector, based partly on highly effective advertising campaigns focused on environmental benefits provided by information technology.

Many observers in the business world believe the German company's lack of focus due to its highly diversified operations is its main problem. Despite satisfactory earnings, the price of Siemens shares lags far behind general price trends on the German stock exchange during recent years.

In a recent interview published in Der Spiegel, Heinrich von Pierer said the long-term profitability of Siemens' present business operations can only be improved if the company reaches positions of No. 1 or No. 2 in its respective industrial sectors. The German company is now reviewing its business activities and seeking constructive solutions for future operations.

THORD ANDERSSON

Alcatel aggressive in GSM market

Alcatel Alsthom of France has a broad range of business operations that includes everything from train manufacturing to satellite projects and mobile telephones. After huge losses incurred in 1995, the French group is taking an aggressive approach to the infocom sector, based partly on a program of close cooperation with Cisco.

Alcatel Alsthom was established in 1986 by ITT of the U.S. and CGE (Compagnie Generale de Electricité). The company has 190,000 employees in about 110 countries. Based in Paris, the French group is a major supplier of technology for the telecommunications, energy supply and transportation sectors. Sales in 1996 totaled FRF 162.1 billion (USD 25.9 bn).

The operations of Alcatel Alsthom are divided into four main areas: telecommunications, cable and components, electrical engineering and systems as well as GEC Alsthom (an affiliated company that manufactures trains, ships and industrial power units).

Nearly 40 percent of group sales are attributable to telecommunications, an area in which Alcatel Alsthom has a broad product portfolio. Alcatel Telecom has 80,000 employees working in eight divisions: exchange systems, transmission, broadband products, access products, mobile communications, components and a separate division for radio, aerospace and military defense.

Alcatel Telecom's strength lies in traditional transmissions and its E10 and S12 exchange systems. Two-thirds of the French company's telecom operations are concentrated in Europe, but Alcatel also has strong positions in China, India and several other developing nations. Focus today is placed on access products and technical innovations, with particular emphasis on ATM techniques and satellite communication systems, as well as business expansion in Asia and North America.

The company's mobile operations are a weak point, since it entered the market for digital mobile telephony relatively late. Alcatel's share of the world wireless market is about 4 percent, but the company is pursuing a more aggressive approach in the GSM sector.

Its huge operating loss in 1995, which totaled about FRF 25 billion (USD 4 bn), was the largest one-year deficit in the history of French industry. It was caused partly by Alcatel's inability to stay abreast of new developments and changes in the deregulated telecom market.

Serge Tchuruk, CEO of the French company for the past two years, has tried to introduce a flatter organization and more customer-oriented business activities. In 1996, Alcatel reported a surplus of FRF 2.6 billion (USD 415 million), and the company has also noted higher order bookings in 1997, attributable primarily to telecom operations.

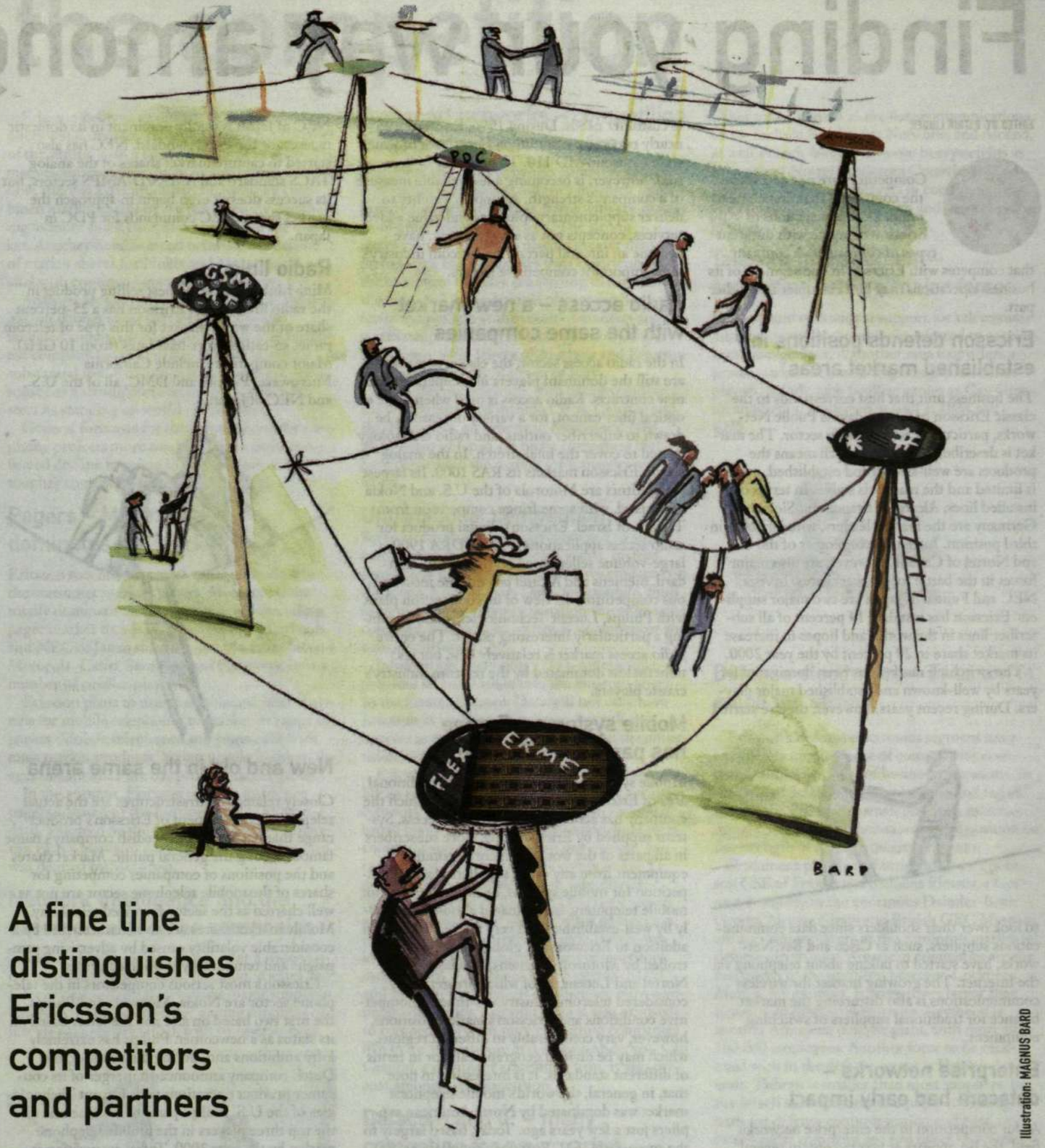
Alcatel's strengths include local market knowledge, political lobbying acumen and alliances with other companies. It has cooperated with Motorola in the GSM market for the past several years. The cooperation was intensified recently in such areas as product development and distribution of CDMA, Wireless local loop and DECT products.

To strengthen its market position, with special emphasis on the U.S., Alcatel Telecom entered a program of strategic cooperation with Cisco Systems in June. Among other agreements, Alcatel will use Cisco's network operating systems in its ATM and ISDN products while Cisco, in turn, will avail itself of Alcatel's experience in voice transmission and ADSL in its IP solutions.

Another extension of Alcatel's focus on the infocom sector is reflected in its cooperation with Microsoft, a program designed to develop the ADSL technique and provide new interactive multimedia services in conventional copper networks.

Products for the multimedia sector account for about 10–15 percent of Alcatel Telecom's total sales which, according to information released by the French company, will increase to about 50 percent by the year 2002.

NILS SUNDSTRÖM



A fine line distinguishes Ericsson's competitors and partners

Illustration: MAGNUS BARD

THE BALANCING ACT

It's impossible to say exactly which companies are Ericsson's major competitors. It depends entirely on which part of Ericsson we're talking about. For some sections of the company, it's relatively easy but the competitive situation is much more complex for other sections of Ericsson. The fine line that differentiates partners from competitors sometimes presents a difficult balancing act. On the following two-page spread, we will present Ericsson's major competitors in various business areas.

PLEASE TURN PAGE!

Finding your way among the competition

EDITED BY: PATRIK LINDÉN

Competitors are not necessarily the companies that first come to mind. Different sections of Ericsson compete with different types of companies. A company that competes with Ericsson in one segment of its business operations may be a customer in another part.

Ericsson defends positions in established market areas

The business unit that best corresponds to the classic Ericsson of former days is Public Networks, particularly its switching sector. The market is described as mature, which means the products are well-known and established, growth is limited and the market is stable. In terms of installed lines, Alcatel of France and Siemens of Germany are the market leaders, with Ericsson in third position. Lucent Technologies of the U.S. and Nortel of Canada, however, are also major forces in the battle for market shares. In Asia, NEC and Fujitsu of Japan are two major suppliers. Ericsson has installed 14 percent of all subscriber lines in the world, and hopes to increase its market share to 20 percent by the year 2000.

The switching market has been dominated for years by well-known and established major players. During recent years, however, they've started

to look over their shoulders since data communications suppliers, such as Cisco and Bay Networks, have started to talking about telephony via the Internet. The growing market for wireless communications is also disturbing the market balance for traditional suppliers of switching equipment.

Enterprise networks – datacom had early impact

As for competition in the enterprise networks field, the list appears at first to contain several very familiar names. We see Siemens, Alcatel, Lucent, Nortel and Mitel, another Canadian company, as well as NEC and Fujitsu of Japan. The convergence of voice and data had an early impact on this sector of telecom. Accordingly, computer suppliers like IBM and Hewlett-Packard and systems integration companies such as EDS are now also considered potential competitors. In addition, telecom operators now offer companies so-called Centrex Solutions in their large exchanges, which correspond to the services offered by a business exchange.

Business systems have been digitized during recent years, and the competition has become more intense. Market conditions are characterized today by tough price pressure and small margins on the actual equipment. The future appears to lie in solutions adapted to meet specific customer needs. During 1996, Ericsson sold nearly two and a half million lines, most of which were Consono MD 110. The number of lines sold, however, is becoming a less reliable measure of a company's strength. A supplier's ability to deliver supplementary solutions and value added services, concepts not as easy to gauge, have become an integral part of the telecom industry's most important competitive factors.

Radio access – a new market with the same companies

In the radio access sector, the classic competitors are still the dominant players in competition for new contracts. Radio access is used when cable or optical fiber cannot, for a variety of reasons, be drawn to subscriber outlets, and radio technology is used to cover the final stretch. In the analog sector, Ericsson markets its RAS 1000. Its largest competitors are Motorola of the U.S. and Nokia of Finland, with some fringe competition from Tadiran of Israel. Ericsson's digital product for radio access applications is called DRA 1900, a large-volume seller based on the DECT standard. Siemens and Alcatel present the most serious competition. In view of its cooperation plans with Philips, Lucent Technologies is also becoming a particularly interesting player. The entire radio access market is relatively new, but it's nonetheless dominated by the telecom industry's classic players.

Mobile systems – Europe has passed North America

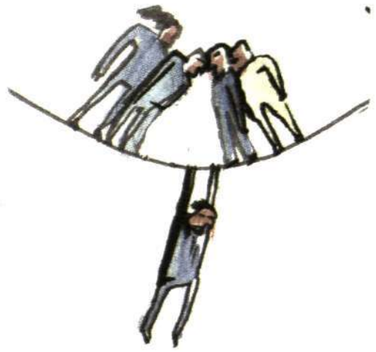
Mobile systems are now considered a traditional area of Ericsson operations, a sector in which the company has achieved considerable success. Systems supplied by Ericsson have more subscribers in all parts of the world than corresponding equipment from any other supplier. Market competition for mobile systems, or infrastructures for mobile telephony, is dominated almost exclusively by well-established and very familiar names. In addition to Ericsson, the global market is controlled by Motorola, Siemens, Nokia, NEC, Nortel and Lucent, all of which are generally considered telecom industry old-timers. Competitive conditions and Ericsson's market positions, however, vary considerably in different regions, which may be divided geographically or in terms of different standards. It is interesting to note that, in general, the world's mobile telephone market was dominated by North American suppliers just a few years ago. Today, based largely to the success of GSM, European suppliers have passed their North American rivals and captured the top spot in Europe.

With the exception of IS-95 and the Japanese PDC standard, Ericsson is the leading global supplier of infrastructures, based on the accumulated number of subscribers in various world networks. However, this does not necessarily mean that Ericsson sold the most lines in any given year.

Ericsson is the dominant company for the analog Nordic mobile telephone system (NMT). Nokia is the only serious competitor. In the GSM sector, major competition comes from Siemens, Nokia and Alcatel. For the AMPS/D-AMPS standard, also referred to as the American standard, Ericsson's most serious competition comes from Lucent, Motorola and Nortel, all of which have North America as their domestic market. NEC of Japan is totally dominant in its domestic market for the PDC standard. NEC has also started to capture market shares of the analog TACS standard and AMPS/D-AMPS sectors, but its success doesn't even begin to approach the market shares NEC commands for PDC in Japan.

Radio links

Mini-Link is Ericsson's best selling product in the radio links sector. Ericsson has a 25-percent share of the world market for this type of telecom radio, so-called short-haul links (from 10 GHz). Major competitors include California Microwave, P-Com and DMC, all of the U.S., and NEC of Japan.



New and old in the same arena

Closely related to infrastructures are the actual telephones; the segment of Ericsson's product range that has made the Swedish company's name famous among the general public. Market shares and the positions of companies competing for shares of the mobile telephone sector are not as well charted as the sector for wired telephony. Mobile market shares are also characterized by a considerable volatility caused by advertising campaigns and temporarily subsidized prices.

Ericsson's most serious competitors in the telephone sector are Nokia, Motorola and Philips, the first two based on size and the latter based on its status as a newcomer. Philips has extremely lofty ambitions and, during the summer, the Dutch company announced a merger of its consumer product operations with Lucent Technologies of the U.S. Philips plans to become one of the top three players in the mobile telephone market by the year 2000. Today, its position is marginal at best, but the company has strong potential based on comprehensive knowledge of world markets for consumer electronics, sales channels and logistics (also see page 5).

There are several interesting Japanese suppliers, including NEC, Sony and Panasonic, but they still concentrate almost exclusively on the Japanese market. In Korea, domestic suppliers include Samsung and LG-Electronics (formerly called Gold Star), two companies with potential to assume greater importance.

In the international market, and in terms of all standards, the three largest mobile telephone companies in 1996 were Motorola, Nokia and Ericsson. Siemens has achieved favorable growth in the GSM sector, primarily in its domestic market, but the German company is not a serious threat to the top three.

Ericsson believes that three or four major suppliers will dominate the mobile telephone market of the future, with a large number of smaller manufacturers operating in niche sectors. Even now, there is a discernible trend whereby combined market shares of the top three are declining as more small companies penetrate the market. Another notable trend is the steady decline of market shares for Nokia and Motorola, in parallel with continued growth for Ericsson.

Analyses focused strictly on the market for digital telephones show that Panasonic is also included among the major suppliers. The Japanese company ranks fourth in the world, with a substantial lead over other small suppliers. Panasonic has a strong position in Japan, which bolsters its standing on world ranking lists.

General forecasts for the future of mobile telephony projects more market players and a continued decline in prices in parallel with much tougher competitive conditions.

Pagers – Motorola dominates the market

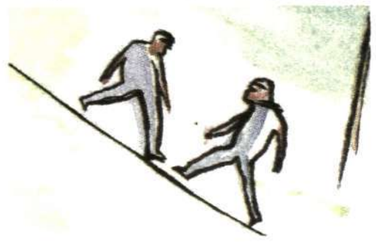
Ericsson recently launched another product in the consumer market: pagers. Motorola is the totally dominant company, virtually controlling pager market trends. Philips of the Netherlands and NEC of Japan share second place, far behind Motorola. Casio, Samsung and Panasonic lead a number of smaller players.

Ericsson plans to utilize established sales channels for mobile telephones to market its range of pagers. Mobile telephones and pagers are both mass market products. Young people between the ages of 15 and 25 are the primary target group.

In the autumn, Ericsson plans to introduce pagers adapted to the European ERMES standard, followed by the launch next year of American FLEX standard pagers. The FLEX standard was defined by Motorola.

Network intelligence and the emergence of niche companies

Traditional telecom companies offer a wide variety of intelligent networks. Ericsson, Alcatel and Lucent rank among the market's major suppliers. Ericsson is the global leader among suppliers of intelligent networks (IN), with 65 operators as



customers in more than 30 countries. Ericsson's success is largely attributable to Telia, the Swedish telecom operator that spearheaded IN services.

The behemoths of telecom, however, will not dominate the IN sector. Niche companies have already emerged, fully equipped with the skills and know-how needed to customize services quickly at reasonable prices. Some of the better known new niches companies include Compaq, Tandem and Stratus.

Transport networks – competition from computer companies

Transport and cable networks comprise another segment of the telecom industry in which traditional suppliers are locking horns with companies from other industrial sectors. The strong increase in data traffic is placing greater demands on capacity, and companies with experience in the computer industry are starting to penetrate the market. The traditional players are becoming fewer in numbers as the result of mergers and partnerships. Alcatel, for example, now cooperates closely with Telstra of Australia and Ericsson is cooperating with Marconi of Italy.

Examples of companies with backgrounds in the computer world include Cisco, Cascade and Bay Networks, all American companies. NEC and Fujitsu of Japan are niche companies that have penetrated the market for transport networks.

Untraditional competition

Some sectors have not been subjected to any competition from the telecom giants. Instead, completely different companies have emerged on the scene. LM Ericsson Data, for example, finds itself in a highly complex situation since the same company, Ericsson, its owner, is a competitor and a major customer.

Information Technology (IT), for example, provides an entry route into the infocom arena. In the future, Ericsson Data will not only have Ericsson as its largest customer, but will also operate as an IT partner with Ericsson in competition with external customers.

Ericsson Data's major claim to fame is probably its role as operator of the Ericsson Corporate Network (ECN), but operations also include a broad range of other activities that include local computer support and system integration. As a result, local competition may comprise the IT departments of Ericsson's own subsidiaries. About 90 percent of Ericsson Data's operations are conducted within and on behalf of Ericsson, and its largest competitive weapon is Ericsson know-how. Notable independent competitors include IBM, Electronic Data Systems (EDS) and Hewlett-Packard, all of which are pure computer companies. Ericsson Data is also exposed to competition from pure consulting companies like Price Waterhouse and Arthur Andersen. Cap Gemini, a computer consulting firm, is also present among the competition.

Datacom and IP – many competing for new market

Ericsson's relatively new business unit, Datacom-Networks & IP services operates in a sector characterized by annual growth in the range of 30 percent. A large number of companies from a variety of industrial sectors have entered the struggle for market shares, with the primary market still concentrated in the U.S. Most of the competition also consists of American companies.

Ericsson works in cooperation with various partners in this relatively new market, for example Cisco and Bay Networks in the router sector and General Datacomm in the field of ATM exchanges.

Although Ericsson works with Cisco in a specific sector, cooperation is not a deterrent to competition in the market for total solutions.

Other major players in the data communications sector include Newbridge Networks and Ascend, as well as such familiar telecom heavyweights as Lucent and Nortel. Andersen Consulting and Logica are also major players in consulting services involving network design and system integration.

Telecom management – consulting firms a major force

Business and operational support for telecommunication networks, commonly referred to as telecom management, is another area that offers a prime market for consulting companies. Major players include such familiar names as Cap Gemini and Arthur Andersen as well as IBM and EDS.

Defense electronics – Ericsson is small but strong

Ericsson's defense electronics segment has a completely unique cadre of competitors, compared with other areas of business operations. In the field of defense communications and radar, Ericsson is a relatively small player by international standards, but maintains a solid position on the strength of its high-quality products.

Prominent players in Europe include Thomson CSF of France and Siemens Plessey, a German company in the enormous Daimler-Benz Group. Alenia of Italy and British GEC Marconi are also major players in the European market for defense electronics. American companies are the real giants of the industry, however. Lockheed Martin, for example, is three times larger than Ericsson in defense electronics. Raytheon is another American defense giant, with more than 100,000 employees. Another force to be reckoned with in the defense sector is Hughes Aircraft. Tadiran is smaller than most suppliers, but the Israeli manufacturer of equipment and systems for defense communication and Elta, an Israeli radar company, are two other interesting companies in the arena. Both are part of the Israel Aircraft Industries Group.

Components - with customers as competitors

In the components sector, the classic companies that compete with Ericsson in telecom markets around the world are also Ericsson customers. Almost all major telecom suppliers buy components from Ericsson. And the largest customer is Ericsson itself. Major competition for components comprises other microelectronics companies, most notably Texas Instruments, Mitsubishi and Philips. Many of the large telecom suppliers also have their own components production operations.

Sirpa Ikola works with market surveillance at Ericsson in Finland. In her opinion, interpretation of market trends and monitoring the movements of competing companies, coupled with subsequent dissemination of the information she gathers to marketing, sales and product management personnel, is one of her most important job assignments. "There is a wide variety of overt information available, and my job is to put the pieces in the right places; it's like a jigsaw puzzle," says Ms. Ikola.

Sirpa hunts down information on the competition

BY: GUNILLA TAMM

Sirpa Ikola is one of many persons at Ericsson who works with business intelligence and market surveillance on a full-time basis. After she earned her bachelor's degree in business economics in Finland, her master's degree from a university in Texas and one year working with sales in the U.S., she joined Ericsson in Finland about two and a half years ago. She has attended several courses in telecommunications and sales. Sirpa Ikola considers herself a generalist and believes there is a certain advantage in not being a technician. She looks at products and solutions from the market angle, but also understands enough engineering to keep up with current telecom industry trends.

"I'm the only person who works with market surveillance, or business intelligence, at Ericsson in Finland, but I have access to many different networks. This is my most immediate network," she says, pointing around the spacious office landscape that comprises her workplace. On her business card, Sirpa Ikola's job is described as "Manager Business Intelligence Program, Systems Marketing." Ms. Ikola, accordingly, is a member of the Finnish company's marketing department, and her colleagues as well as product management personnel are important contact persons who provide and use the information she gathers. Sirpa Ikola monitors the entire telecom industry, its development and trends as well as old and new competitors. She also tries to find links with the Finnish market. Working in cooperation with her colleagues at the corporate level, Business Information Center (BIC), she also takes part in a variety of projects. She works particularly close with business intelligence personnel in the Mobile Systems unit for GSM, NMT and TACS.

Internet and intranet are important tools for Sirpa Ikola. She has developed a home page that she works with on a regular basis. Being on the net enables Ms. Ikola to establish and maintain a broad range of business contacts and sources of information. It has also helped to make her work efforts more visible and appreciated. Her job also includes various types of presentations and lectures.

She also attends fairs and exhibitions, visiting the stands of Ericsson's competitors to gather information. Business intelligence personnel in Ericsson divide the various industrial fairs and exhibitions among themselves, and Sirpa Ikola usually attends three or four large exhibitions every year, in addition to several smaller shows.

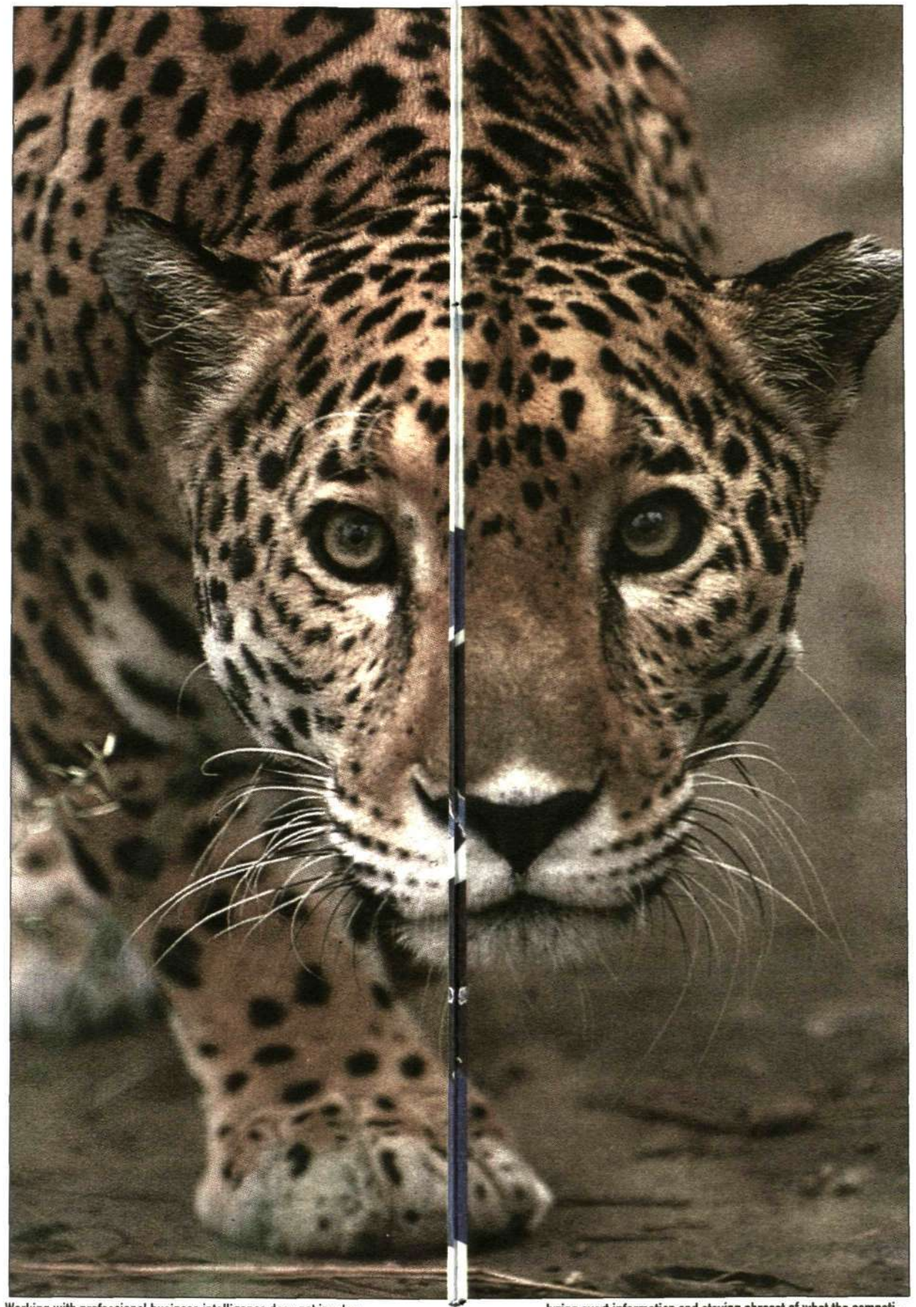
She denies adamantly, with a laugh, that she works as a spy, or secret agent.

"There may have been a slight touch of espionage in the past," she says, "but those days are over. When I visit another company's exhibition stand, I usually introduce myself as an Ericsson employee and ask if the company has any news in the pipeline. I might even tell them something about Ericsson's plans, without divulging any secrets, of course. As a business intelligence staff member, it's advantageous to be a good negotiator. Also, it's not unusual for business intelligence personnel from different companies to know one another.

"Everybody is proud when the company he/she works for launches a new product or makes an important announcement; that's only human. We should take greater advantage of these emotions, and offer something in return," Ms. Ikola says.

Most of the information gathered by Sirpa Ikola is completely overt. It includes articles from daily newspapers, trade magazines, internal personnel publications, brochures and information available on the Internet. Meticulous reading is often required to detect tendencies and trends in the information, and put them in their proper perspective, as if working on jigsaw puzzle. Business intelligence personnel have to be extremely attentive, carefully noting the significance of different factors, even small changes and seemingly insignificant details.

Taking part in customer visits is important to Sirpa Ikola, and often provides valuable information. Customers make comments, for example, that a specific supplier is working on something new, and maybe Ericsson should consider a similar move.



Working with professional business intelligence does not involve sneaking around in the shadows trying to find out what the competition has up its sleeve. For the most part, it's a matter of analyzing overt information and staying abreast of what the competition is doing. The "cloak and dagger" perception of industrial espionage is mostly a myth. Photo: MINDEN PICTURES/GREAT SHOTS

"I pass signals like these to product management and marketing personnel," Ms. Ikola continues. In other instances, certain employee groups might hear some interesting news. Secretaries, for example, can be a source of reliable information. In Finland, Ms. Ikola, points out, secretaries working for Ericsson often get together with secretaries from customer companies.

Business intelligence personnel at Ericsson in Finland work closely with management, but such is not the case in many countries, according to Sirpa Ikola.

"It's too bad, really. Ericsson would benefit from taking greater advantage of the information and knowledge we have developed. It would also raise the skill levels of business intelligence personnel," she asserts.

A fun job? In reply to that question, Sirpa Ikola says:

"Absolutely, it's both enjoyable and diversified, and sometimes difficult and complicated. Contact with other people is one of the most enjoyable aspects and, naturally, it's also gratifying when I get positive feedback and know I have contributed something useful." ■

Tough competition – and cooperation

Despite intense competition, there are also certain elements of cooperation in the telecom industry. Ericsson and other major players work together in various organizations and standardization associations on different questions that may benefit the entire industry. In addition, it's not uncommon for companies in competition with each other in one market sector to enter partnership agreements in another and serve as customers or suppliers in a third sector.

Cooperation on new EU standard

■ Nokia, Siemens, France Telecom and several other companies are working in cooperation with Ericsson on an EU project designed to develop a new radio interface for broadband communications. Hopefully, the project will lead to a new concept that will equal the success achieved by GSM, with clearly legible data transmissions at two megabits per second.

"Our project, entitled Frames (Future Radio Wideband Multiple Access Systems), is being conducted within the framework of EU's research program. In addition to the participation of pure telecom companies, several universities and other concerned interests are also involved in the project," says Per-Olof Anderson, coordination manager for Ericsson's role in Frames. Mr. Anderson works in the Mobile Systems business area's research unit.

The project has been allotted three and a half years to submit a final proposal, which is scheduled for February 1999.

"Our efforts so far have been highly successful," continues Per-Olof Anderson. "It's been interesting to work with colleagues from Nokia and Siemens. Several other companies have expressed their interest in participating, but the project cannot be allowed to grow too fast and risk the loss of efficiency. Today, 150 persons are involved in some capacity, but most of them do not work full-time on Frames."

Whenever a new standard is established, naturally, it's beneficial to have several companies involved in the development process. The participation of key companies increases the potential to achieve widespread approval. The project is still working with a variety of possible solutions based on CDMA and TDMA techniques. The Frames project team will probably submit two proposals to ETSI, EU's standardization authority, in an effort to gain widespread acceptance for the new standard.

"Naturally, we have encountered some friction caused by differences in our modes of operation. We're dealing with several corporate cultures, and most companies are unaccustomed to releasing confidential information, but we all realize that cooperation is a vital requirement," Mr. Anderson continues. "Overall, however, everything has functioned extremely well. It has been a very valuable experience, both professionally and socially. We have also developed a network of colleagues working for other telecom companies."

For Ericsson, it's an obvious advantage to play an active role right from the start in projects designed to establish standards. It enables the company to have products ready for launch when the standards are finally approved. Ericsson is also involved in many different project similar to Frames, projects in which the company cooperates closely with its otherwise bitter rivals in the telecom market. PATRIK LINDÉN

Competitors, customers and suppliers

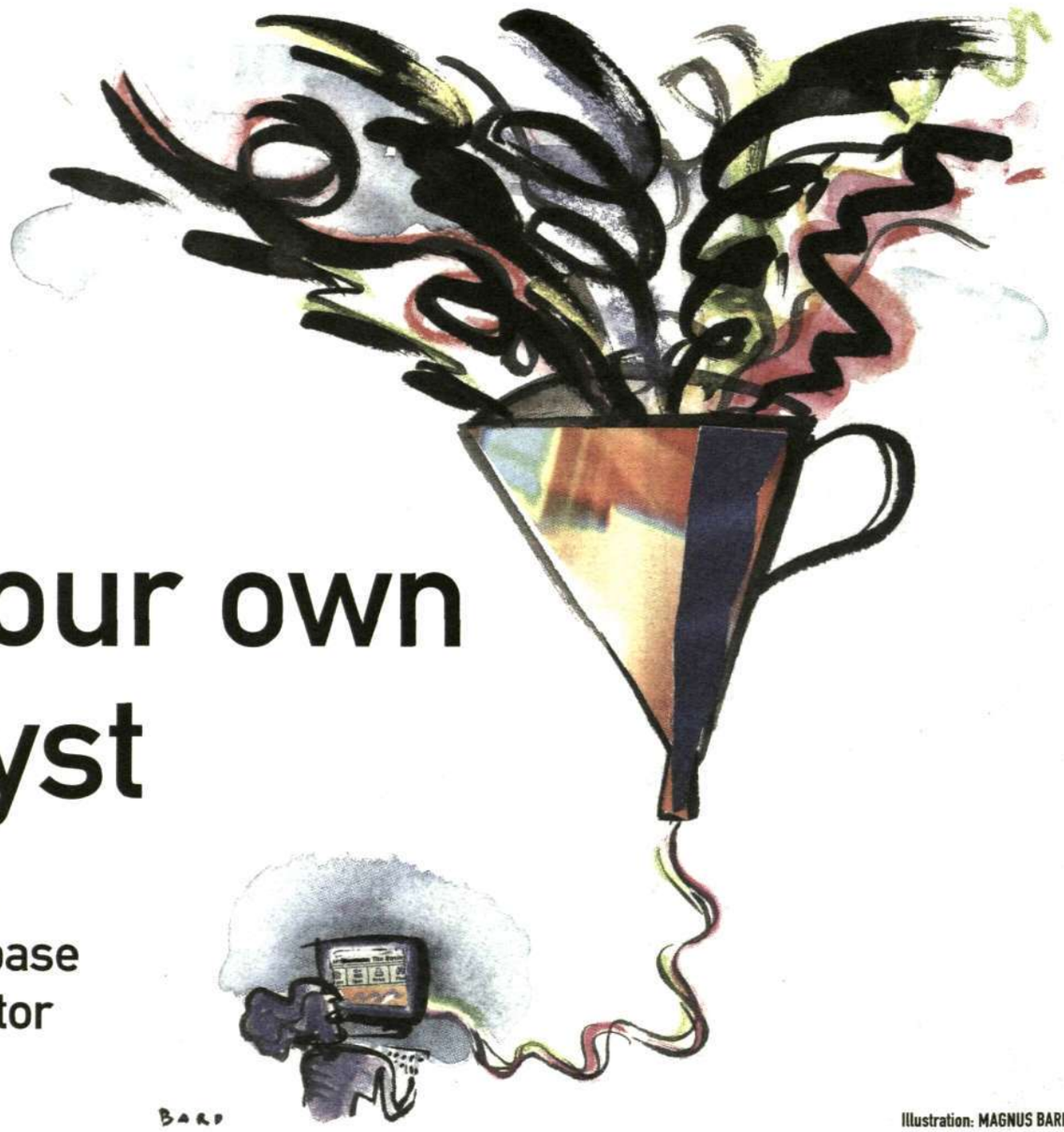
■ In the field of microelectronics, every ingrained concept about competition is turned upside down. Ericsson buys and sells products to and from companies otherwise regarded as bitter rivals and competitors in other areas of business operations.

Lucent Technologies and Motorola of the U.S., for example, are obviously competitors in the infrastructure sector and in the pursuit of mobile telephone market shares. Like Ericsson, both companies produce their own components but, despite their stature as competitors, all three companies buy and sell components to and from each other. So-called unholy alliances are also formed, whereby Ericsson and Motorola, for example, manufacture different components that supplement each other and can be marketed jointly to third party customers.

None of the major telecom companies can afford to deal exclusively in its own components for the sake of prestige. Performance and price are the key elements. The fact that Ericsson sells components on the world market is a tribute to its high-quality products and the strong demand they command from competitors, customers and suppliers.

Siemens sells Ericsson's DECT telephones

■ Siemens and Ericsson both offer solutions for similar needs in the public network and GSM sectors, for example, and the mobile telephone market. Siemens, however, has no product of its own for cordless office telephones, also known as DECT telephones. In order to offer its customers complete solutions, Siemens recently started to sell Ericsson's DECT telephones under its own name. The arrangement is a further example of how companies competing against each other in one market serve as customers or cooperation partners in another.



Be your own analyst

Ericsson has its own database with competitor information

Illustration: MAGNUS BARD

Now you can keep yourself updated of all the happenings in Ericsson's competitive world or monitor trends in your specific market through a database on Ericsson's intranet. A large share of all available information on Ericsson's various spheres of activity and business intelligence operations is stored in the database called Ericsson Business Information Center (BIC). The database, or Web site may be accessed at the following address: http://bic.ericsson.se/.

BIC is the concrete result of Ericsson's concentration on a holistic approach to business intelligence. The database was designed primarily for persons working professionally with analytical projects in all parts of Ericsson, but much of the information is also accessible and highly useful to all Ericsson employees.

"In the past, different departments and sections of Ericsson bought the same information, or duplicate copies of reports by independent analysts. We often paid several times for one report. Now we purchase one copy of pertinent reports and other information services, which are then entered in our intranet so they are accessible to all parties concerned. It's simpler and less expensive," explains Jesper Ejdling, manager of the Business Information Center.

Linked together by the intranet, local information hubs work in all parts of the world and throughout Ericsson's international organization. Different business areas and local companies have also developed sub-databases for relevant information concerning their specific needs.

For the curious people out there, the database contains a virtual library of reading material. For those of you interested in daily telecom industry news, several newsletters and news agencies specializing in the telecom sector are accessible via the intranet. Among a host of other features, there's a special file for current press releases from Ericsson's competitors. Or, if you want to study a specific market area, there are various reports on most of the world's important markets, basic information about different countries, and other interesting tidbits. For inquisitive readers with insatiable appetites, the database contains several hundred pages of information and analyses covering all major telecom players and markets.

A wealth of interesting information about competitors and telecom markets is available on the home page of Ericsson's world market database, accessible at the following address: http://bic.ericsson.se/.

All the information is available on the intranet and is accessible through your Web browser, Netscape, for example.

If you have any information you want to include in the database, you can access the network working with business intelligence via the Web site.

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