contact

ERICSSON PUBLICATION FOR EMPLOYEES WORLDWIDE

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Illustration: HENRY JOHANNES

Back to the Baltic states

Ericsson gained access to three new European markets when the Baltic states regained their independence a few years ago. Distinctly different market trends have been noted in the three countries. Mobile telephone density in Estonia, for example, is comparable to several Western European countries, while progress in Latvia and Lithuania has lagged behind. **Center**

From Kumla to Bilbao

In the Basque city of Bilbao, 400 Ericssonians are employed in an Ericsson production company that manufactures NMT telephones and terminals for the TACS analog mobile telephone standard.

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Karlskrona to Flextronics

Ericsson's Verkö and Vedeby production plants in Karlskrona, Sweden, will be transferred effective April 1, 1997 to Flextronics International, an American company. They will also take over the 930 employees.

Page 4

Three pages about Ericsson's world

Contact continues its efforts to provide news coverage of slightly less than sensational events that take place on a daily basis in Ericsson. This edition contains four pages of "Ericsson worldwide" news.

Pages 15–17

Renaissance for the NMT system

Ericsson's first mobile telephone standard, the analog NMT 450, is by no means history. Russia and other Eastern European countries are still placing orders for new NMT 450 systems.

Page 10

Broadband on a broad front, page 22–23

"Be part of the access revolution."

Ericsson Telecom AB are looking for more people.

Internet and New Media services puts the access network in focus when entering the next century. New technologies, new customers and de-regulations will create a tremendous amount of opportunities in this area. Multi-service access solutions is the key which allows our customers to be competitive both today and tomorrow. The ANx systems is designed for an environment characterized by speed, flexibility and innovations. The first products will be put on the market this year.

Competence, enthusiasm and creativity enables us to take advantage of state-of-the art technologies developed in-house and by partners. Together with you, we will be the first to discover what is beyond Internet Access.

ANx is a product company within Multi-Service Access in Business Unit Public Networks

Product Development

ANx Product Development is developing access products to meet this demand. The products uses different types of access technologies, e.g. HFC networks, FTTx and copper/DSL. We are using modern technology in our system platform and modern development tools and languages. The services that our products support are e.g. telephony, fast Internet and different types of video/TV services.

Our products are now entering their second generation and this, combined with the market demands, requirers that we strengthen our competence in a number of areas, such as;

- Systems management
- IP and Datacom
- Erlang design
- Embedded design
- RF design
- HW design
- Micro Processor programming
- System verification
- Product handling

Does this sound interesting to You? Do You have knowledge, interest or experience in any of these areas? Give us a call!

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Marketing & Market Support

The broadband access market is in an intense and competitive build-up phase. We work not only with our traditional customers, but also new operators as well as Internet Service Providers.

You have experience from marketing, market support, access networks, ATM or datacom. You enjoy making business happen, frequent customer contacts and partly very intense team work.

Our team need more people. Is this something for You?

Contact Per Olof Sjöberg, ETX.ETXPOSS, + 46 8 719 04 91, Product Company Manager

Product Management

The broadband access business is in an intense entrepreneurial phase. Our success relies on team spirit, initiatives within your area of responsibility, and an open approach to new market challenges. We have frequent contacts with leading customers and partners. We need more Product Managers.

You probably have experience from product management, access networks, ATM or datacom. You also have a good grasp of commercial and strategic matters in combination with your technical background.

For more information please call Henrik Scharp, Manager, ETX.ETXSCHA, +46 8 719 90 32 or Peter Linder, Manager, ETX.ETXPRLR +46 8 719 29 74.

Operations

FOA and Time to Customer is our responsibility. We make the network integration, implementation and customer service for ANx. Our team focus on broad competence, that all of us know the products well enough to be able to work in all areas. Some of us will travel as ANx reaches the implementation phase. We need you that wants to focus on

- Implementation Engineering
- Customer Project Management

Interested? Please contact Massoud Saleknejad, Manager, ETX.ETXSAMA, +46 8 719 42 30.

Applications may be submitted by memo or mail to Catarina Larson Åstrand, Human Resources, ETX.ETXLCAT, etx.etxlcat@memo.ericsson.se, +46 8 719 08 36.

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Ericsson's 90,000 employees are active in more than 130 countries. Their combined expertise in fixed and mobile networks, mobile phones and infocom systems makes Ericsson the world-leading supplier in telecommunications. You can get more information about us on our homepage **www.ericsson.se/SE/**

ERICSSON

Speaking Out at CeBIT '97

March 13 – 19, Hannover, Germany

As part of Ericsson's overall approach to CeBIT 97, a series of 18 co-ordinated lectures will be presented. In addition to visiting the two Ericsson stands at the fair, the targeted audience is also being invited to attend the Corporate Lecture series in the fairground's Convention Centre.

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

For further information, please contact the Project Leader for Ericsson's Corporate Lectures, Annelie Hellström. Memo: LME.LMEANNE. E-mail: annelie.hellstrom@lme.ericsson.se. Phone: +46 8 719 5563 (ECN 850 95563). Fax: +46 8 719 1976 (ECN 850 91976).

Friday March 14th 1997

10.00–10.30	2005 – Ericsson Entering the 21st Century	*Lennart Grabe*
10.35–11.05	Business Support Systems – Liberate the True Potential of IT in Telecommunications Today	*Marc Roman*
11.10–11.40	The Competitive Internet Landscape	*Kaj Juul -Pedersen*
11.45–12.15	Ericsson's Multimedia Access System	*Henrik Scharp*
12.20–12.50	Quick to Market. Turnkey Network Solutions – from Business Planning to Operations, for Fixed and Mobile Operators	*Lawrie Baker, Olle Lövenheim*
12.55–13.25	The Global Consumer's View on Communication	*Henrik Pålsson*
13.30–14.00	Mobile Telephony – The GSM Evolution into Internet and Multimedia	*Torbjörn Nilsson*
14.05–14.35	Spectrum of DECT	*Dick Gerbrands*
14.40–15.10	Personal Mobility – Solutions for your Company	*Berend Bergsma*
15.15–15.45	Multimedia Workgroup Systems and High Definition TeleConferencing	*Giacomo D'Amato*
15.50–16.20	Above the Line of Visibility	*Erik Nordling*
16.25–16.55	Trends in Call Centre Business	*Jörg Schmidt-Folkerts*

Monday March 17th 1997

10.00–10.30	Wide Area Paging – The Future of Ermes	*Lars Gandils*
10.35–11.05	DRA 1900 – A Fully Digital Wireless Local Loop Solution	*Magnus Odelius*
11.10–11.40	Intelligent Networks – Seizing Opportunities in a Competitive Market	*Sara Bern*
11.45–12.15	Driving Forces and Solutions for Fixed Mobile Convergence	*Hans Lindqvist*
12.20–12.50	Network Operations Systems Architecture Evolution	*Eric Buatois*
12.55–13.25	Billing and Customer Care Systems – Present and Future	*Gerard Ponce de Leon*

"It's all about customer value! We should not manufacture or market anything that does not provide value or other benefits for customers. The ability to develop and apply creative and entrepreneurial skills in a global organization, combined with clearly defined and common visions, goals and strategies, speed and efficiency are the most important ingredients for success," says **Ingemar Nilsson**, Vice President of the Public Networks business unit of Ericsson's new business area Infocom Systems.

It's all about customer value

Ingemar Nilsson is head of Public Networks, a business unit of the business area Infocom Systems. Photo: JOHAN OLSSON

What are the strengths of the new Infocom Systems Business Area?

"Our strength lies in the concentration of Ericsson's collective skills and expertise in wired, private and public networks in multimedia technologies now under development," Mr. Nilsson continues.

"Ericsson has built up a very strong range of excellent products for public, business, transport and cable networks. We are also working on the development of a new generation of systems for data communications," he explains.

• What is your view concerning the future potential of Public Networks?

"Public telephony is a sector with excellent future potential. Some of our product areas have noted annual growth of 100 percent or more during recent years. I believe we have a very bright future, with strong potential for rapid and profitable growth," Ingemar Nilsson says.

"The Public Networks business unit is undergoing dynamic development, with new customers, applications and new technologies in areas such as Access, fixed and radio-based networks, the Internet, Intelligent Networks, Customer Services, Network Management and others.

"We are approaching a merger of voice and data, a transition that will present significant new opportunities for us and our customers."

Ingemar Nilsson cannot hide his optimism, continuing: "To achieve strong results, we have to develop the creativity needed to capitalize on new opportunities! The future is in our hands - we control our own destiny."

"In the future, it will also be important for every Ericsson employee to show pride in his/her work, to communicate their ideas and not shy away from new opportunities."

"Employees who work creatively in the pursuit of pioneering business instincts increase the risk of mistakes, however. But we shall not be afraid to make a mistake or two along the way. What is important is that we learn from our errors and miscalculations, making sure they are not repeated. People who don't dare to take risks are often left behind."

• What are the major challenges facing Public Networks in 1997?

"Providing optimal service to our customers, making sure they are satisfied. successful and profitable customers.

"It is also critical that we succeed with our modernization program for AXE, and achieve rapid volume growth for our new access products. We have also developed new solutions in broadband access. Ericsson Telecom Sweden will be the first Public Networks unit to test the market with a delivery to Telia, Sweden's main telecom operator. It will be exciting to follow progress during the year.

"Hopefully, more customers will follow Telia's example. Telia is a reference customer that operates on one of the world's first and most thoroughly deregulated markets. The Swedish operator is now branching out into other market regions. We hope to follow in the wake of Telia's penetration in new markets. We shall supply complete-coverage solutions for Telia's new company in the U.S., including a solution for telephony and Internet traffic across the Atlantic.

"Other challenges this year include further reductions in lead-times and operating expenses and creation of an Ericsson spirit, work methods, creativity and the business acumen needed to succeed today."

• What is the key to your success?

"It's all about customer value! We should not manufacture or market anything that does not provide value or other benefits for customers. The ability to develop and apply creative and entrepreneurial skills in a global organization, combined with clearly defined and common visions, goals and strategies, speed and efficiency are the most important ingredients for success."

"To successfully defend and strengthen our positions, we must improve our skills in developing solutions in close cooperation with customers. And, very important, we must improve our knowledge and understanding of customer needs and demands.

"Optimal proximity and cost efficiency at optimal speed – there is a fairly accurate summary of the basic requirements for future success."

• When did you start working for Ericsson?

"In 1969, I left southern Sweden, where I was born and grew up, and came to Stockholm as a "guest worker" at Ericsson in Stockholm. And I'm still here today."

"I started working with marketing in the Africa and the Middle East units for Ericsson Telecom."

• Summarize your visions of the future?

"I hope we can find new work methods, new modes of operations, if you will, that enable us to utilize more effectively each other's skills in parallel with increased delegation of responsibility.

"My visions are focused on drawing upon the assistance of highly skilled colleagues in efforts to achieve business objectives and create a brighter future for Ericsson and our world. Hopefully, we'll all pull together in the same direction, deriving personal and professional satisfaction from our everyday job performance standards," concludes Ingemar Nilsson.

JOSÉPHINE EDWALL–BJÖRKLUND

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Karlskrona plants sold to Flextronics

On March 31 Ericsson Business Networks' Verkö and Vedeby plants in Karlskrona will be turned over to Flextronics International Ltd. The sale was completed on February 12 when the final contract between Ericsson and the buyer was signed in Nacka Strand.

Under terms of the agreement, Flextronics is taking over all production, including machinery and premises, plus 930 employees. These resources are being used to form Flextronics International Sweden AB, which will also serve as the basis for the company's European operations.

Vedeby and Verkö are both highly modern plants. Verkö was inaugurated as recently as 1993. Ronny Nilsson, production manager at Ericsson Business Networks AB, is now leaving Ericsson to become president of the new company and European manager of Flextronics International Ltd.

"We have to change over quickly from being a division of Ericsson with a single internal customer to a customer- and market-oriented organization with external customers," Ronny Nilsson says. "We have a unique opportunity, with Ericsson know-how and the experience that Flextronics is providing, to make Karlskrona Flextronic's very best unit and Ericsson's best partner. We are determined to be a world-class supplier."

Retaining all customer contacts

"By outsourcing our production to Flextronics, a world leader in contract manufacturing, we are strengthening our position and increasing our efficiency," says Rolf Eriksson, executive vice president of Ericsson Business Networks. "This is fully in line with Ericsson's strategy of focusing, and releasing resources for, our core business of supplying total solutions."

A 90-person unit, with Mats Jonsson as manager, is being formed within Ericsson Business Networks AB to handle customer orders and logistics. Customers will not notice any difference in their relations with Ericsson and will continue to deal with Ericsson as their supplier. Ericsson is naturally retaining rights to all products, systems and solutions. Flextronics has virtually no products of its own and manufactures only on a contract basis for other companies.

Production for three business units

All of the production in Karlskrona involves products, systems and solutions for three of the business units in the Infocom Systems Business Area. Production for the Business Networks unit comprises the MD110 business exchange and the custom-tailored Consono exchange systems, as well as system telephone instruments in the Dialog 3000 series. It also includes base stations for Ericsson's DECT-based "Freeset" system for cordless telephony.

The Eripax data exchange is manufactured for the Data Network and IP (Internet Protocol) Services units, and the DECT-based DRA 1900 radio access system, the fastest-growing production segment, is produced for the Public Networks business unit. Sales of the latter system, which was introduced in the beginning of 1996, have amounted to more than a billion kronor in only a year.

Speedy negotiation

The first contacts between Ericsson and Flextronics took place as recently as early last summer. They were followed by long and intensive negotiations between the two parties. By November, however, the terms of the agreement were essentially complete.

"This important and strategic agreement with Ericsson gives us good opportunities to expand our activities in Europe and increase our presence in the telecom industry," Michael E. Marks, chairman and president of Flextronics International Ltd., says. He emphasizes that he wants to create a long-term partnership with Ericsson.

THORD ANDERSSON

THEN AND NOW

■ Ericsson began operations in Karlskrona on March 3, 1947 when Telefonaktiebolaget LM Ericsson took over Tobaksbolaget's snuff plant and began to manufacture telephones. Now, almost fifty years to the day later, it is ending its own production in Karlskrona after having shipped millions of instruments to customers throughout the world.

There were pleased partners at the negotiating table in Nacka Strand on February 12 when the final agreement was signed. Seated, from left: Gösta Burlin, Rolf Eriksson, Michael E. Marks and Ronny Nilsson signed the comprehensive contract documents. Standing, from left: Leif Svensson, Timothy L. Stewart and Tommy Nilsson assisted. Photo: THORD ANDERSSON

Employees in Verkö give their views on the sale

Agneta Petersson, documentation; 26-year employee.
"I think it was a good idea that we were sold and can keep our jobs. It feels good to know that the top manager, Ronny Nilsson, is joining Flextronics. Right now, I'm on loan to 'telephone assembly,' normally I put together documentation folders for customers. I feel a little nervous, now that we have to learn better English."

Anette Nilsson, operator/assembler of telephones; slightly more than one year with Ericsson.
"I think it's great, not only for us employees but for Karlskrona as well. A multinational Flextronics can certainly attract other companies. The information we received on what would happen was fine."

Per-Ola Strågegård, DECT logistics, seven-year employee:
"It's a good solution. We will be a big part of Flextronics, but we were too small within Ericsson. "When the transformer business was sold to Tamura, I got this job: getting together DECT material for customers all over the world. Our managers have given us good word-of-mouth information about the change, supplemented by the 'Infoluren', our internal newsletter, where you could get all the information."

Mats Holmberg, warehouse worker, 27-year employee:
"It's a pity that part of a genuine Swedish company is sold to foreigners. But otherwise Ericsson might have been forced to shut down operations here in the future. The new owner, Flextronics, has to be given a chance. We were kept well-informed about what was happening."

Elisabeth Mikić, MD110 preinstaller, just under two years with Ericsson:
"On the whole, I certainly think it's a good idea. I hope that Flextronics does in Rome as the Romans do and listens to us employees. There's talk of scheduled 'breaks,' and that we will have to wear uniforms! I hope we can keep our flexible way of working and individual responsibility."

news briefs

Omnipoint boosts orders to SEK 4.4 bn

■ Ericsson has concluded an agreement with Omnipoint, an American mobile systems operator, covering the supply of network equipment for the PCS standard for use in areas of Pennsylvania and New Jersey. Omnipoint also increased its original order for Ericsson's IS-661 system and network equipment for GSM. The total value of Omnipoint's orders is now SEK 4.4 bn.

Quick Logic now in product line

■ Ericsson Component Distribution has been appointed the distributor for Quick Logic in Sweden and Finland. Quick Logic makes programmable logic modules containing 1,000 to 10,000 gates – circuits that can be programmed by a customer.

"Adding Quick Logic to our product line fills the gap between standard circuits and circuits designed to customer specifications, so-called Application Specific Integrated Circuits (ASIC)," says Kjell Jonsson, the engineer responsible for product application at Ericsson Component Distribution.

New structure for Electronic Distribution

■ Ericsson Electronic Distribution AB, Ericsson's components distributor, has coordinated the two technical-components distributors: Ericsson Standard Components and GB Topcom Electronics. A new unit, Ericsson Component Distribution, was formed March 1.

Ulf Gladh, formerly manager of Ericsson Standard Components, has been named manager of the new unit. Ericsson Component Distribution has more than 100 employees and is expected to have sales of SEK 7 million this year.

1998 – Global deregulation

■ Sixty-eight countries that account for 90 percent of the world's telecommunications market last month signed a free-trade agreement that deregulates telecommunications. The signing followed three years of negotiations within the framework of the World Trade Organization (WTO).

The global market for telecommunications is estimated to amount to SEK 4,000 billion. The agreement essentially opens this market for free competition on January 1, 1998.

Ericsson will clearly benefit from this. The agreement affects Ericsson's customers directly, and what is good for them is also good for Ericsson.

"The agreement makes the world more like Ericsson," Sweden's trade minister, Leif Pagrotsky, noted. "The Swedish telecommunications market has been deregulated for a number of years."

The three largest markets, the U.S., the European Union and Japan, which combined account for 75 percent of telecommunications revenues, will be almost completely deregulated in 1998. But a number of EU countries have special schedules. Spain will deregulate in December 1998, Ireland in the year 2000, and Portugal and Greece in 2003. Japan has set certain restrictions on foreign ownership. Certain East European countries will deregulate in 2003.

Ericsson will stay in Arendal

■ Under terms of a new proposal, Ericsson will remain in Arendal in southern Norway. In the beginning of January a proposal to concentrate Ericsson's Norwegian operations in the Oslo area had created a great deal of excitement and concern. Following discussions with all parties involved, a new proposal has been put forth whereby Ericsson will remain in Arendal but its operations will be partly changed and a new organization will be created.

"Certain sectors, mainly marketing units, will move to the Oslo area, where most of Ericsson's Norwegian customers are, but Ericsson will keep development work and other operations in Arendal," Paul Falck, information manager for Ericsson's Norwegian companies, says.

Ericsson's operations in Norway today are directed in part to the Norwegian market, but also -- in the case of AXE and other products -- to the Danish and Finnish markets.

Under the new proposal, Ericsson's operations for the Norwegian market would be brought together in Oslo, while the sectors that focus on other countries and Ericsson-wide requirements would form separate units with their own profit centers and would remain in Arendal. A new organization and business plan are to be developed. With these as a base, a final decision will be made this summer.

Smallest mobile to date

■ It weighs only 135 grams and is only 10 centimeters long. Its "talk time" is three hours, with a full 60 hours of stand-by time. Ericsson's most advanced GSM telephone to date, the GF 788, is now being launched. The telephone has three different menu "layers:" simple, advanced and customer adaptable.

The telephone is being offered in four metallic colors: dark gray, "Bordeaux red," dark blue and dark green. With its new, improved pattern of characters and symbols, the instrument is exceptionally easy to use. Sales of the telephone will begin in all GSM markets in March.

hello there!

What will happen with 'year 2000' problem?

As the year 2000 approaches, operators of many of the world's largest computer systems face a serious problem: how to indicate "2000" in situations where the year's date has previously been shown by only two digits. The use of "00" would not distinguish between the 20th and 21st centuries. The problem is one that many companies, public agencies and organizations are now beginning to tackle.

Peter Cronström is the manager of Ericsson's core unit for information management/information technology.

• Will the turn of the century mean problems for Ericsson's data systems?

That's a really big question. If we don't begin to make preparations now, it can very well mean major problems for Ericsson. There's no doubt about it.

• Will you people in Ericsson's core unit for information management/information technology be doing anything about the problem?

We have hired a person who will be responsible for coordinating activities related to this project. But it's a very big problem. All Ericsson companies have to appreciate this fact and begin to prepare themselves. It's not something that can be managed from the Parent Company alone.

Peter Cronström is the manager of Ericsson's core unit for information management/information technology.

• What is the next step?

We will distribute information to all company managers and IT managers telling them what will happen and what we in the Parent Company will be doing. We will point out that LM Ericsson Data can provide support, and that it has already begun to make preparations. But it's important to emphasize that the responsibility has to lie with the various companies in our business.

PATRIK LINDÉN

industry news

Nokia introduces profit-sharing

■ Nokia will introduce a worldwide bonus system for all of its employees during the year. The bonus will be linked to the growth in Nokia's profit per share. The smallest bonus, 2.5% of a year's pay, will be paid when profit per share has grown by 20%. The bonus then increases to a maximum of 5% of a year's pay when the growth in profit per share amounts to 35%.

Alcatel to add web scanner

■ Alcatel has decided to build the web scanner made by the Unwired Planets company into its mobile telephones. The scanner will enable subscribers to access the Internet directly from a mobile telephone, initially the One Touch PRO model.

Cisco to supply ATM in Italy

■ Telecom Italia has selected Cisco to supply equipment for its ATM network for business customers. Expansion of the ATM (Asynchronous Transfer Mode) network is a three-year project. Telecom Italia has to date purchased 250 Cisco IGX exchanges and 50 servers.

Royal Air Force selects Nortel

■ The British Royal Air Force (RAF) has awarded a GBP 10 million contract for a mobile communications system to Nortel, the Canadian telecom supplier.

The RTTS (RAF Transportable Telecommunications System) can be assembled quickly and operate globally. It can handle the transmission of both voice and data, as well as text and fax traffic.

Nokia's sales rose in 1996

■ The Nokia Group reported that sales in 1996, calculated in Finnish marks, rose just under 7%. Excluding currency and foreign exchange effects, income increased by 25%. Mobile telephones accounted for the largest increases. A strong fourth quarter helped boost full-year sales. Income per share was down approximately 25%.

'Communicator' takes GSM prize

■ Nokia's "9000 Communicator" was designated "invention of the year" at the annual GSM World Conference in Cannes recently. Ericsson unveiled its new GSM telephone at the Conference this year. The next issue of Contacy will carry a detailed report from the Cannes sessions.

Distribution pact: Alcatel and Motorola

■ Alcatel and Motorola have concluded an agreement to begin distribution of each other's telecom equipment in segments of the market where the equipment is complementary. The two companies will thus be able to offer complete solutions in a number of areas.

The Radio Planning Council comprises representatives of technology, marketing and production units. Top (l-r): Anders Forsén, Lars-Göran Bernau, Gösta Lemne, Jan Uddenfeldt, Björn Boström, Jan-Erik Stjernvall and Bo Hedberg. Bottom (l-r): Stefan Ulveland, Urban Fagerstedt, Micael Ridderborg and Rolf Ranvert. Other members of the Council not present when the picture was taken are Dan Redin, Erik Löwenadler, Torbjörn Nilsson, Philippe Charas and Bo Bergström. Photo: ANDERS ANJOU

Gazing into the future

Greater coordination of base station development programs to achieve improved utilization of synergies is the most important task of the Radio Planning Council.

Concrete objectives include lower total costs for production and distribution of base stations, a common construction method for certain base station variations and a clearly defined agenda for development of multi-standard radio.

The Radio Planning Council was established about six months ago, comprising representatives of technology units as well as marketing and production. Jan Uddenfeldt, Technical Director of Mobile Systems, is Chairman of the Council.

"Ericsson works with a large number of base station models. There are also several variations of the different models and, to meet customer demands, we need even more," Jan Uddenfeldt says. "The need for long production series is becoming more acute and, until now, we have not been particularly adept at utilizing volume effects. Today, however, we have acquired extensive skills and know-how through mobile telephone production operations, and we intend to capitalize on that knowledge in our production of radio base stations."

Focused on reducing product costs

Strong concentration is focused on reducing product costs, most of which are attributable production costs. This is not enough, however, since more than 50 percent of total costs is attributable to factors outside the production process. The focal point today is "cost to customer," defined as total costs for production and distribution of, in this case, radio base stations. The Council's goal is to reduce "cost to customer" by 25 percent annually.

Common construction method

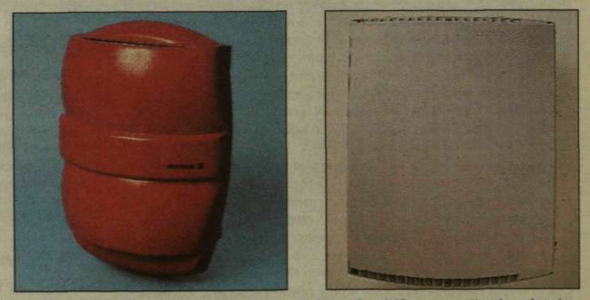
Technicians have been talking in terms of generic base stations for a long time, a collective term for multi-standard radio that can be "loaded" with software compatible with different mobile telephone standards. The base stations would have only one radio per sector, instead of one radio per carrier wave, thereby creating the potential for dramatic cost savings.

Development has now reached the same level of objectives and, with modern technology, it is certainly possible to produce a generic base station. The Radio Planning Council has formulated a program for the new product concept, including research and development as well as construction of test systems. Under the umbrella of Mobile Systems' new organizational structure, the unit Generic Radio Network Products is prepared to accept the challenge. The council hopes the first generic radio base station, developed in accordance with its present concept, will be ready for commercial operations by the year 2000.

"Make no mistake, however," Jan Uddenfeldt concludes emphatically, "this does not signal the end of present-day products, which will continue to be upgraded in other development programs."

GUNILLA TAMM

Radio Planning Council capitalizes on available synergies



Greater demand for radio base station variations for different applications has increased the need for synergies between base stations for different standards. Pictured above are just a few of the many variations.

New unit created for broadband mobile systems

Two new product units have been created in Mobile Systems: Wide Band Cellular (WCS) for development of broadband mobile systems and another for D-AMPS and PDC standards.

The new units comprise core operations in the new technology organization introduced on February 1, 1997. More than 1,000 employees have been affected, directly or indirectly, by the change. Technicians employed in the GSM, NMT and TACS business units are not affected.

Technicians in Sweden and abroad will be affected, directly or indirectly, by the new technology organization. The persons shown in the picture above are not part of this article. Photo: BJÖRN SEGER

"The former organization for development of base stations was created in the early 1990s and, with the rapid development of recent years, the old structure simply could not support the scope of cooperation we need today," explains Stellan Nennerfelt, Mobile Systems Personnel Director. "There were two key reasons for reorganization of development resources for base stations," he continues.

"We have to focus on development of the next generation of mobile systems, which will provide broadband services. The other reason for reorganization is to reduce the costs of present-day radio base stations, which are becoming more exposed to competition. Naturally, there are similarities between the D-AMPS and PDC standards and, by combining development programs for both standards, we will create a common platform for future development.

Wide Band Cellular

The new unit for Wide Band Cellular (WCS) will be placed in Ericsson's Japan unit, the PDC Mobile Systems business unit, under the management of Dan Redin. Employees who have worked with broadband radio technology, will be transferred to the WCS unit.

"The first application is focused on the Japanese standard, which is now under development in broadband technology. Although initial efforts will apply specifically to the Japanese market, overall development will not be restricted to the needs of Japan," Stellan Nennerfelt, explains.

D-AMPS and PDC

For organizational purposes under the new structure, base station development for D-AMPS and PDC systems will be assigned to the American standard for Mobile Telephone Systems, with Urban Fagerstedt as manager.

The two standards have some similarities, and the new organization will capitalize on links between D-AMPS and PDC. Significant coordination gains can be reaped not only for base stations, but also throughout the entire chain of constituent products, from antennas to such supervisory systems as OSS.

The first year of operations under the new organizational format will be regarded as a necessary investment to create a common platform for future cooperation.

After a few more years, the new organization will begin to yield "returns" in the form of more efficient development programs and longer production series.

Generic products

The development unit for broadband radio technology, will become a collective product unit in the new organization for the three systems units. The manager will be Rolf Ranvert, with special responsibility for development of generic radio products.

An important development project is focused on a new base station called MSR, which will be used as a common denominator in all systems. It will also provide dramatic cost savings in the future.

To strengthen resources in radio development, employees who now work for Ericsson Microwave Systems in Kista will be transferred to the unit Generic Radio Network Products. The military defense contracts now handled by these employees will be transferred successively to Ericsson Microwave in Mölndal.

Taking advantage of resources

More than 1,000 Ericsson employees will be affected, directly or indirectly, by the new organization format. In addition to employees working in Kista, changes will also be implemented in Mölndal and Linköping, Sweden, Nürnberg, Germany and Ericsson's operations in Ireland.

"The reorganization of technology units will help create a solid platform for mutually beneficial and highly necessary cooperation in our development programs for mobile telephony," concludes Stellan Nennerfelt.

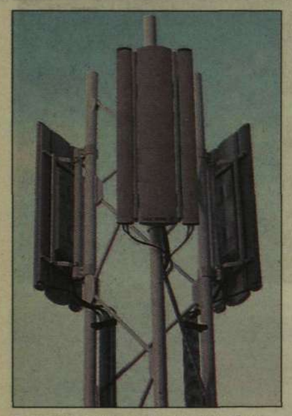
"Skilled technicians, especially those working in radio technology, remain a rare commodity. The new organization will help us take better advantage of their skills and expertise."

GUNILLA TAMM

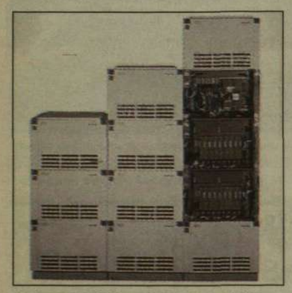
Dan Redin. Photo: BJÖRN SEGER

Urban Fagerstedt Photo: ANDERS ANJOU

Rolf Ranvert Photo: ANDERS ANJOU



In "active antennas," part of the base station is moved up into the antenna to provide greater coverage ranges.



(L-r): RBS 884 Pico, RBS 2301 and RBS 300.

New organization for base station development provides important platform for cooperation

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TEXAS INSTRUMENTS

"Portable AXE" saves time and money

It has been called a portable AXE. Ericsson Erisoft in Umeå, in northern Sweden, has developed the Stand Alone Test Tool (SATT), a tool that saves time and money in the installation of new radio base stations. Everything is contained in a laptop computer, which is also imminently suitable for production tests, cell planning and training.

The SATT is used to ensure that the hardware in a radio base station is working in communication with the switch - totally independent of the actual switch.

"Using the AXE commands in a portable computer, we can commission radio base stations long before the exchange in the mobile system is connected. This means that Ericsson can quickly demonstrate to customers that the radio base is functioning and thus get paid for the equipment earlier," according to Per Viktorsson, project manager in Umeå for sales and marketing of the new test tool.

A first version of SATT was released last spring for Ericsson's D-AMPS, TACS and PDC mobile systems. Now there are more than 20 portable test tools at various lab and production units in Sweden, the U.S. and other countries, tools that can test one base station at a time. This spring, the product will be used in the field for installing new base stations in Chile.

"That's when we'll make an overall evaluation to measure how much more efficient SATT makes the installation process," says Fredrik Granström, a technician and sales person, holding up the five-kilo computer that contains everything needed for the tests.

The equipment is intended to work in the city as well as the jungle, to withstand tempera-

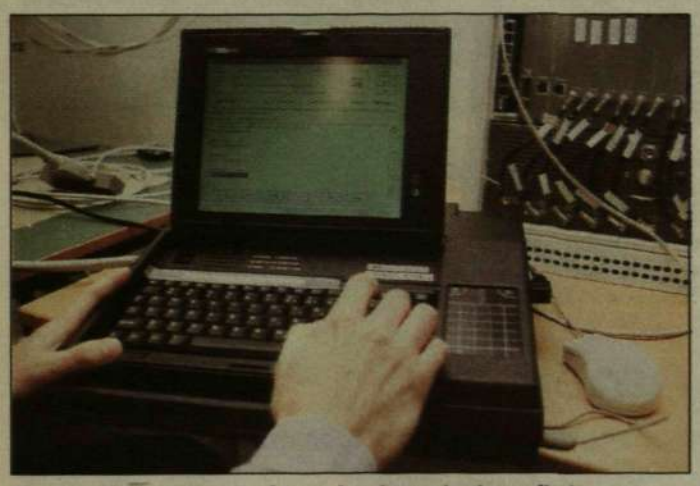
SATT simplifies installation of radio base stations

tures from -15 C to +55 C. A few simple procedures allow the user to test different types of radio base stations for different mobile systems.

Time savings

SATT records test results in a protocol. That demonstrates that the base stations are working and cuts the number of visits technicians have to make to radio sites if something is amiss after transmission begins.

"Ericsson is frequently not responsible for the transmission part. If we can demonstrate that the radio base stations are working, then the fault has to be somewhere else. That saves time and money. In some past projects, we made as many as eight return visits to a radio site, and sometimes the sites were quite far away," says Anders Otto, product manager for radio base stations at the business unit for American Standards in Richardson, Texas.



The Stand Alone Test Tool tests hardware in the radio base station to ensure that it will work with the switch, independent of the actual switch. Everything is contained in a laptop computer.

Portable switch. Fredrik Granström and Per Viktorsson at Ericsson Erisoft, Umeå, run the SATT test tool that streamlines procedures for installing new radio base stations. Everything is handled by issuing AXE commands from a laptop computer. The equipment can be connected in a few simple steps and is also suitable for production tests, cell planning and training. Photo: NILS SUNDSTRÖM

He came up with the idea for the tool with his colleague Håkan Rösth in Stockholm. Both emphasize the importance of SATT being based on AXE commands, that the same software is installed in SATT as in an actual exchange.

"That is the great advantage over other test tools. This is not a product living in its own little world requiring its own maintenance and updates," Håkan Rösth explains.

Ericsson Erisoft is already storing new software versions for various mobile systems on SATT's own homepage. That makes it easy for users to download the latest versions.

"The concept is system-independent in a PC environment. That means SATT is highly useful for production, lab tests and training," Håkan continues. "Instead of leasing test channels on a large AXE, users can test the radio base stations whenever they wish."

Another future application of SATT is cell planning. It can be used in an existing network when new radio sites are being set up without disturbing the network switch.

GSM solution

Early in the summer of 1997, SATT will be released as a test tool for new GSM and PCS 1900 versions, in other words systems that previously used Ericsson's UPSim (User Part Simulator) test tool for the same tasks.

"Expanded functionality with half-rate and enhanced full-rate make it impossible to further develop UPSim," says Lars Isheden, project manager for testing and installation at the European Standard business unit.

In the U.S., where Ericsson sells GSM and AMPS systems, the switch means that installation technicians now need only one test tool. "They can work on different systems just by switching the software with a click of the mouse," Anders Otto says.

Connect via SATT

In its GSM version, SATT not only tests the radio base station's control channels but also their voice channels. Consequently, the tool works for voice communication, for making a normal call.

"The product plan for next year includes a feature for connecting two radio base stations via SATT, which really makes it a mini-switch," Per Viktorsson says.

Anders Otto agrees, "If we were to develop the switching function, this product would have even greater prospects. Then we could use SATT as a small exchange in a wireless office concept."

NILS SUNDSTRÖM

New Kumla factory manager comes from USA

■ On May 1, 1997, Swen Nilsson will become the new manager of the Kumla factory. Swen is currently production manager at Ericsson's plant in Menlo Park, California. He will replace Roger Eriksson, who will assume responsibility for global production in the Mobile Telephones and Terminals Business Area. Roger is in turn replacing Kaj Nielsen, who will become part of executive management in the business area and become responsible for special industrial and business development projects.

Successful NMT 450 tests in Slovenia

All over the world, mobile telephone systems are growing at a prodigious rate – and not just the digital versions. The analog NMT 450 system, Ericsson's first mobile system, is being revolutionized in eastern Europe.

Better capacity. **Per Walström, the project leader, and Bengt Vale conducted successful tests interleaving mixed channels in Ljubljana.**
Foto: OLA SVENSSON

Tests in Slovenia indicate that capacity can be improved by 70 percent by using technology which is a mixture of old and new. And there is more to come.

Analog NMT 450 was originally introduced in 1981, but is now being upgraded by using the latest technology. The system is well-known for its excellent coverage, which is why it is a Federal standard in Russia. On the other hand, digital systems are much better at re-using frequencies and providing higher capacity. NMT is now moving in this direction too.

"This is important, since many of our customers in eastern Europe are expanding rapidly," says Hans Bendes, an NMT product manager who is focusing on capacity aspects. "The name of the game is to build more capacity in the major cities."

The limitation of the NMT 450 systems has been its inability to cope with more than 180 channels, compared to more than 1,000 channels in analog NMT 900. But the old system can now handle a great many more subscribers if interleaving is employed. This involves mixing channels, a technique which has been used for some time in NMT 900 (where it provides 2,000 channels).

Tests in Slovenia

"Interleaving allows us to increase the number of channels – and the radio capacity – by at least 70 percent. Our tests in Ljubljana last autumn on Mobitel, the Slovenian operator's network demonstrated this," says Per Walström, the project leader, who is now compiling the results of the tests.

Basically, interleaving reuses the frequency spectrum by shifting new channels by 12.5 kHz in relation to the old channels, without changing the actual bandwidth, which is 25 kHz for each channel. The new channels are placed between the existing ones to ensure that there is no collision in the cells.

"This technology requires a new type of cell planning, and the system frequently has to be rebuilt," says Hans Bendes, who praises the commitment shown by everyone who participated in the tests in Slovenia.

Teams from the marketing organization, NMT radio network systems management, the mobile telephone manufacturing unit in Lund, the base-station plant in Kista, systems development in Karlskrona and units in Norway and Switzerland have all contributed to the new NMT 450 concept.

"Within a week, the engineers in Karlskrona produced an improved solution which automatically switches calls over to interleaved channels if the handset is equipped with this function."

New telephones

The next stage is to update interleaving in the NMT specifications so that all telephone manufacturers can use it – Ericsson has already contacted Benefon.

Maximum utilization of interleaving can be achieved in a network providing that about 50 percent of the subscribers have access to it. In the tests in Slovenia, 20 percent of a total of 11,000 subscribers had Benefon mobile telephones with an interleaving facility.

"Old telephones cannot access the new channels, but the interleaving function is nonetheless a dormant feature of the software used in Ericsson, Nokia and Benefon telephones, and the software in some older models can be also be upgraded to handle the new channel numbers," Hans Bendes says.

Better quality

Although many new NMT customers want to expand the system, operators who have been using the system for some time are more interested in improved performance for their existing customers. As a result, in the autumn Ericsson also tested a new antenna technology for NMT 450, in cooperation with Telia Mobitel, a major Swedish operator.

"Tests confirm superior indoor coverage and better quality in downtown areas. There is also better coverage for handheld phones, which is useful for mountain walkers, for example," Hans Bendes says.

The "polarization-diversity" antenna technology used means that signals can be received in all directions (rather like a microwave head on a TV antenna dish).

Per Walström, who is collating results from the tests in Slovenia and Sweden, can also see further opportunities for improving the system.

"We have also tested microcells in Slovenia. In the GSM world, people talk about hierarchical cell planning (building cells on top of each other in layers to increase the capacity of the network). The same effect can be achieved in NMT by manipulating the various base-station parameters," Per Walström says.

According to the NMT product development plan, the capacity of the 450 system can be extended by using technology already employed in other systems. This includes improved hand-over functionality, semi-automatic FRA cell planning and dynamic power regulation of both mobile telephones and base stations.

"In a few years, we will have "intelligent" antennas which will enable us to achieve further capacity gains," Hans Bendes says. "It all depends on the needs of the market. We have the capability to help our customers expand."

There are currently 1.5 million NMT 450 subscribers in Eastern Europe, the Nordic countries, Malaysia and Thailand.

NILS SUNDSTRÖM

Successful GSM campaign in North America

■ Ericsson's advertising campaign for the GSM system attracted considerable attention in the autumn from people in the industry, according to the prestigious Starch ratings organization. The GSM advertisements in Business Week's North American edition had the highest readership scores in the Communications category.

In the past year, Ericsson has been running a global "business to business" campaign to promote GSM's tried and tested technology of the future. Four ads presenting visions for GSM technology appeared in the world's major business and specialist publications.

"Ericsson's GSM system has become better known all over the world. And that means that recognition from a prestigious ratings institution such as Starch feels particularly good," says Birgitta Pettersson, who is in charge of GSM advertising at Mobile Systems.

Readership measurements for the first three insertions in Business Week North America indicate that Ericsson's advertisements were in the top ten in the overall category – in competition with consumer products such as cars and computers.

Business Week North America has a circulation of 870,000 and 4.7 million readers.

NILS SUNDSTRÖM

High-profile campaign. Advertisements for Ericsson's GSM system published in Business Week North America in the autumn had the highest readership scores in the Communications category.

Indelec – where vision is part of the expertise

"We are a center of expertise for terminals for mobile telephony in fixed networks, so-called fixed cellular systems. That means that we are enhancing and producing terminals for NMT and TACS, and manufacturing circuit boards for the RBS 2000 base station. Those are our most important responsibilities," says Bo Westerberg, manager of Indelec, Bilbao, which has been a division of Ericsson Radio S.A. in Madrid since last November.

Luis Emaldi, right, development manager at Ericsson Indelec, here together with Asier Ugarte. Photo: GUNILLA TAMM

Indelec was started in the autumn of 1984 as a joint venture of Telefonica (the Spanish telcom), the Basque provincial government and Philips. In addition to working on private radio systems, the company competed with Ericsson in the manufacture of terminal systems for the NMT 450 system. In 1993 Philips withdrew from Indelec and Ericsson acquired an interest of approximately 19 percent in the company. This stake was increased in the next two years and in 1995 Indelec became a wholly owned Ericsson subsidiary. It has been a division of Radio S.A. in Madrid since the end of last year.

When Ericsson became a part-owner, the company undertook a substantial program to develop terminals for Radio in the Local Loop (RLL) – radio in fixed-wire systems. At the same time, Indelec was reorganized and Ericsson took over the management.

Technology park

Indelec moved into its present quarters in the new Parque Tecnologico in Zamudio, just outside the center of Bilbao, in 1989. The park represents the efforts of the Basque Province and the city of Bilbao to attract electronics companies to compensate for the loss of shipbuilding and steel companies about 15 years ago.

"We have good premises and it is not difficult to find technicians," Bo Westerberg says. The unemployment rate in northern Spain is 22 percent and there are qualified technical training facilities in both Bilbao and San Sebastian. Jobs in companies in Parque Tecnologico are highly prized. When it ran an advertisement in the local media, Ericsson received more than 1,000 replies from qualified technicians.

Ana Bárcena is one of the skilled women who comprise more than one third of the employees in the development department.

From Kumla to Bilbao

Ericsson Indelec has approximately 400 employees, 300 of whom are in production operations. The company produces analog telephones for the TACS and NMT mobile telephone systems. Production of these instruments was transferred to Bilbao from Kumla last year. The move was completed in two months, rather than three as had been projected, as a result of the excellent cooperation and wholehearted efforts of personnel in both locations.

Bo Westerberg is the manager of Ericsson Indelec in Bilbao, Spain.

In addition to the analog mobile telephones, Indelec produces terminals for fixed cellular systems (FCS), "mobile telephony for fixed-wire networks." It also turns out circuit boards for the new RBS 2000 radio base station.

One third women

Luis Emaldi, in charge of development, says that more than a third of the 51 employees in the development department are women. This is not due to any special policy but simply to the fact that there are many skilled women technicians in the area and their knowledge of English is often better than the men's.

"Our most important task this year is to develop a new telephone for the analog ETACS system," Luis Emaldi says. "We have close contacts with the research people at Ericsson in Research Triangle Park in North Carolina. We can benefit from the experience gained in developing the new telephone in the AMPS version that was introduced last autumn. Our production of the new telephone will start here in the third quarter," he adds.

Hoping for breakthrough year

Francesco de Lacha, who is responsible for marketing and finance, has been with the company almost from the start. He believes there is a market for fixed cellular terminals (FCTs) and hopes that 1997 will be a breakthrough year.

"By working with the business units for mobile telephony at Ericsson Radio Systems we can both reach the right prospective customers," he says, noting that China, Latin America and South America are attractive areas.

He cites Telefonica's installations in rural areas of Spain as important references.

Standardization of the plants in the business area Mobile Systems has been under way for a number of years and has now been implemented in most of the plants. This is true of the production at Ericsson Indelec. Simply stated, it means that all production units use the same production administrative systems and the same equipment in order to ensure that production can be shifted smoothly from one plant to another.

A new way of working

"We are now going a step further and are part of the Groupwide project involving the model company," Bo Westerberg says. One step in this program involves changing the old financial system for a new one, CODA.

"But," he explains, "it involves not only a new financial system but a new way of working."

When Bo Westerberg is asked what he hopes for in 1997, he does not hesitate to answer.

"I hope that there is a long-sought market breakthrough for fixed cellular systems, FCSs, and that our position as Ericsson's design center for fixed cellular terminals, FCTs, becomes established. Our objective is also to be a center for the design and production of special terminals outside the FCT field."

GUNILLA TAMM

Illustration: HENRY JOHANNES

New markets in the Baltic states

Less than one hour's flying time from Stockholm are three relatively new markets, the reborn Baltic states. The region's geographical proximity to Sweden and the other Nordic countries is increasingly apparent if we recall that Sweden's first university was built in Tartu in Estonia, and that Riga, the capital of Latvia, was once Sweden's largest city.

Ericsson is active in all three Baltic countries. Their markets are considered to have excellent prospects, even if they have been progressing at different rates. A shortage of funds is holding up telecommunications growth to some extent in all the Baltic states.

These three countries have experienced great changes in recent years. Now, everyone knows that a dramatic transformation cannot occur overnight. Full entry into Baltic telecom markets is a long-term investment.

Telecommunications badly needed

Expansion of telecommunications systems in the Baltic states is urgently needed. There are still households that have been waiting 20 years for a telephone, and ancient equipment is still in service in some places.

But getting a telephone does not take so long today, and there are ambitious expansion programs. On the whole, the atmosphere in the Baltic countries, is very optimistic

From a Nordic perspective, it is tempting to regard the Baltic region as a single entity, but the countries differ considerably. Apart from the period of Soviet domination, for example, there are no historical or linguistic links between the countries. Their telecommunications markets have also developed very differently.

Common prerequisites

However, the similarities between the countries should not be ignored. As newly formed independent states after the collapse of the Soviet empire, they share the same prerequisites. And, of course the Soviet epoch has not passed without a trace. Although the queues have mainly disappeared, telephone bills, for example are still paid in cash, over the counter.

PATRIK LINDÉN

Spiraling optimism
There is bubbling optimism in all the three Baltic republics, following independence.. They all want to expand their telecommunications systems, although financing difficulties sometimes slow down the process. Ericsson has a presence in all three countries – Estonia, Latvia and Lithuania.
Photo: PRESSENS BILD

Ilkka and Ginta look after Ericsson's interests in Riga

Two people are looking after Ericsson's interests in Latvia from the company's representation office in the capital city, Riga. They hope that operations will expand in the future.

As a late arrival in Latvia after Latvia's independence, Ericsson made its first bid to modernize the telecommunications network in 1992. Ericsson Finland, subsequently took over responsible for the Latvian market from Ericsson Telecom – the Finnish company already had Estonia under its wings. A new representative office in Riga was opened in 1995.

"Ericsson missed a couple of major orders, so now we are focusing on the second round of modernization of the telecom network," says Ilkka Jäntti, who is in charge of the Riga office. "It is very important for us to secure this order so that we become properly established in the Latvian market."

Telia of Sweden has attempted to enter the Latvian market previously. During his visit to Latvia, King Carl XVI Gustaf of Sweden inaugurated an AXE exchange, but this failed to increase business as hoped. AXE was a success, however, and people who obtained AXE lines inserted this information on their business cards.

Subsequently, in popular parlance, all digital lines became known as AXE lines, no matter who the supplier was.

"Like the other two Baltic states, Latvia is a country where the desire to invest is stronger than the ability to find the funds," notes Ilkka Jäntti. "The economy is weak, and companies can only register sales if they can offer financing solutions. This does not work in Ericsson's favor, since our products are seldom the cheapest, although they offer good value for money in the long term."

"Latvia is the Baltic country with the greatest number of Russian inhabitants, and Russian is the language of business in Latvia. Russians are responsible for a high proportion of business operations in this country," Ilkka Jäntti says.

Latvia

Population: 2.5 million, of whom 820,000 in Riga
Major cities: Riga, Daugavpils and Liepaja
Currency: Lat, 1 Lat = SEK 13
Inflation (estimated): 13.1 percent in 1996, 13 percent in 1997
Telephone lines per 100 inhabitants: 29.1
NMT: 0.4
GSM: 0.7

Ilkka Jäntti, seen here with his assistant Ginta Joste, is in charge of Ericsson's representation office in Riga.

Weak economy

Latvia has not yet developed new industries and business ventures to replace the heavy industry that existed during the Soviet era. As a result, the economy is weak.

The telecommunications network is gradually being expanded and modernized, and tariffs are being adapted to market rates. Formerly, local calls were free of charge and overseas calls were a problem. As a result, people are not prepared to pay high charges for local telephone services, and they are not accustomed to using international facilities. This severely limits revenues, which in turn hinders expansion.

But there is a good reason why one of the common corporate values for which Ericsson is noted is persistence – a quality that will be called for in the Latvian market.

Ericsson returned to Estonia in 1990

The last time was in 1929, when Ericsson was manufacturing bakelite telephones in Tartu. But in 1990, Ericsson returned with Eripax, and in 1992 with NMT. AXE and GSM followed later. Ericsson currently has 90 percent of the mobile network market and is the market leader in exchange technology.

"Estonia is clearly making progress. In 1996, our sales were about SEK 160 million, and the market is expected to double by the turn of the century," says Matti Lehtimäki, President of Ericsson's Estonian subsidiary since the turn of the year.

Matti comes from Ericsson Finland, where he is Export Manager. He did not come to Estonia by chance, since Finnish Ericsson has marketing responsibility for Estonia, although this is now being gradually transferred to the Estonian company.

Matti Lehtimäki believes in Estonia and claims that, in market terms, it has made more progress than the other Baltic countries.

"Telephony penetration is 5 percent here – the highest figure in Eastern Europe and more than in some Western countries," Matti says. "As far as mobile systems are concerned, we are selling as fast as we can deliver. We are the biggest of the three GSM operators."

"At the moment there are about 27 telephones for every 100 inhabitants, but there is a program for installing 300,000 digital lines within three years. That will mean about 40 phones per 100 inhabitants."

The Eesti Telefon state utility has a monopoly over wired telephony, maintaining a tradition going back to the turn of the century. But Eesti Telefon is not exclusively state-owned – Swedish Telia and Telekom Finland jointly hold 49 percent of the shares and have representatives working at managerial level in the Estonian company. In 1997, Telia will be field-testing Ericsson's digital Airline access system in Tallinn. If the results are satisfactory, this could mean additional business for Ericsson. Ericsson's RAS 1000 analog system, which is particularly suitable for rapid expansion of telephone access in rural districts, has also been selling well in Estonia.

Estonia

Population: 1.5 million, of whom 430,000 in Tallinn
Major cities: Tallinn, Tartu and Narva
Currency: Estonian krona, EEK 1 = SEK 0.60
Inflation (estimated): 22 percent in 1996, 13 percent in 1997
Telephone lines per 100 inhabitants: 27.3
NMT: 1.5
GSM: 3.5

Matti Lehtimäki is the new manager of the Ericsson subsidiary in Estonia.

Political unrest

The political situation in Estonia is a little uneasy. There are several political parties, forming continuously shifting coalitions. This tends to have an negative effect on the readiness of foreign companies to invest. But things look brighter in the telecommunications sector. Everyone agrees on the need for expansion, and there is no political contention.

Conni – one of the company's first women presidents

The Ericsson subsidiary in Lithuania is headed by one of the Ericsson's first presidents who is a woman – Conni Simonsen. She has been in charge of Ericsson's operations in Lithuania since September 1, 1996. Ericsson made its first deliveries to Lithuania in 1919, but the company's presence in the country in modern times dates back to February 1992.

"In 1993, the Danish Ericsson company opened a representation office in Vilnius and in 1993 we signed our first AXE contract," Conni Simonsen says. "In the same year, we received an order for a business network from the Lithuanian electricity corporation. Ericsson now has a local subsidiary with 30 employees, and I am the only non-Lithuanian here."

"Selection as system supplier for Bite, one of Lithuania's two GSM operators, signaled Ericsson's breakthrough in the mobile sector in 1995."

Lithuania

Population: 3.7 million, of whom 600,000 in Vilnius
Major cities: Vilnius, Kaunas and Klaipeda
Currency: Lita, 1 Lita = SEK 1.85
Inflation (estimated), 1996 & 1997: 13 percent, 10-15 percent
Telephone lines per 100 inhabitants: 26.8
NMT: 0.3
GSM: 0.9

Ericsson's subsidiary in Denmark is currently responsible for the Lithuanian market, although the intention is that that the Lithuanian company should take over in 1997. There are several links between Lithuania and Denmark – Tele Danmark, has a holding in Bite, for example.

Today, Ericsson has a strong position in wired, mobile and private networks.

"Lithuania has an ambitious telecommunications plan, and it is estimated that there will be 35–40 telephones per 100 inhabitants by the year 2015, compared with less than 27 today," Conni Simonsen says.

Substantial digitalization

The government operator, Telekomas, will be implementing substantial digitalization of the network in 1997 and 1998, with financial support from the European Investment Bank. As far as Ericsson is concerned, this means 13 new AXE exchanges with a total of 100,000 line, making a total of 17 Ericsson transit exchanges in four of the five regions in Lithuania.

It is anticipated that wired telephony will be deregulated by 1998 and that, as an initial step, Telekomas will be privatized. Privatization is a priority objective for the new Conservative Government, so deregulation may occur even sooner. Mobile telephony has already been privatized.

"Today, there are 45,000 mobile subscribers, but this figure is increasing the whole time," Conni Simonsen says.

Status symbol

An Ericsson telephone is a status symbol for Vilnius businessmen today. If they cannot afford a BMW, they can at least buy a 388.

Conni Simonsen of Danish Ericsson is one of Ericsson's first women subsidiary managers, following her appointment last year as president of the newly re-established Lithuanian company. She is the only non-Lithuanian among the company's 30 employees.

Customs lobbying may save millions for Ericsson

Ericsson has saved SEK 200–500 million in duties as a result of farsighted lobbying efforts when Sweden joined the EU. In addition, Ericsson has saved at least another SEK 200 million by carefully monitoring its interests on trade issues. There are numerous examples of why it is important to monitor import duty regulations and to try to influence them.

"We are used to low import duties in Sweden. As a result, companies don't have systems for monitoring their interests concerning duties. Sweden's membership in the EU and an increasingly global economy put matters in a different light," says Nina Norén, leader of a team that focuses on trade issues for Ericsson.

"This is mainly about keeping an eye on the influx of products and components and having good internal communications so that we know which import duties are important to Ericsson," Nina says.

The profit is a resualt of farsighted lobbying when Sweden joined the EU

Before Sweden joined the EU, Swedish import duties were 2.5%. The import duty to the EU was then 7% and 14% on microelectronics and components, respectively. Most of these imports come to Europe from the U.S., the Far East and Japan.

When Sweden, Finland and Austria – all of which had relatively low import duties – joined the EU in January 1995, the Union was forced to reduce certain duties. This was a result of a provision in the General Agreement on Tariffs and Trade (GATT) which stated that the total duty level could not be raised. It was in conjunction with cuts in individual duties that Ericsson succeeded in satisfying their interests.

"Quite simply, our industry prevailed at getting its wishes and arguments across, and that is why we could push through reductions on products and components that were important to us," says Nina.

Lucrative work

The team focusing on trade issues has continued their work since Sweden joined the EU.

"We save a lot of money by closely scrutinizing the EU's duty regulations and anti-dumping regulations, for example. If we can prove that a product is not manufactured in the EU, the duty is removed (duty suspension). The duties are there to protect production within the EU," Nina explains.

By focusing on duty suspensions, the Mobile Systems Business Area at Ericsson has saved SEK 40 to 50 million each year. The work is bureaucratic and tedious, but it is profitable.

Ericsson collaborates with companies such as Nokia, Alcatel and Siemens in European industrial organizations which focus on these issues, since they all have a common interest in import duties.

Although Sweden's membership in the EU has meant higher duty costs for Ericsson's imports, on the whole it has been economically advantageous. Half of Ericsson's market is European, and by joining the Union, it surmounted all tariff barriers inside the EU.

"Many Swedish companies have not yet had a chance to react to the new situation. We receive study visits from other companies that want to see why we have been successful," Nina says.

Head start

Companies in the U.S. are much better at this kind of work. Europe is starting to wake up, but generally Swedish companies lag behind.

"Perhaps it is our head start in this area that has made us so successful," says Nina. "Another reason is that Ericsson works cross-functionally, and our goods forwarding, purchasing, technology and executive management work together. It can become tougher when other companies and industries get started and want to influence duties into the EU."

In addition to having good connections, Ericsson has promoted a dialogue on trade issues with government authorities and different organizations for many years. Ericsson has two full-time employees – one in Washington and one in Brussels – whose only task is to monitor Ericsson's interests.

"It's important to realize we can maintain a dialogue with government authorities and the EU Commission to influence duty levels and regulations. Those rules aren't set in stone, and there is a great deal of money to be saved," Nina concludes.

PATRIK LINDÉN

Nina Norén heads a team that monitors Ericsson's interests in trade issues. There is a great deal of money to be saved by closely scrutinizing the EU's duty regulations. The binders in this photo contain all of the EU's duty regulations. Used correctly, they can prove to be profitable reading.

IT duties may disappear

■ When the World Trade Organization (WTO) met in Singapore before Christmas, great strides were made toward concluding an IT agreement. This means that duties on products such as computers, telecommunication products, components and component manufacturing equipment could be abolished by the year 2000. So far, 85% of the world market, including the EU, Japan and the U.S., has indicated support for the agreement. However, a few questions remain to be settled before the agreement can be concluded. If it does go through, Ericsson can save more than SEK 100 million each year on lower import duties.

looking back

LM Ericsson's plant in Buffalo, built in 1907

The photo, right, shows the exterior of the LM Ericsson Telephone Manufacturing Co. that was completed in Buffalo, N.Y. in the U.S. in 1907. Approximately 200 persons were engaged in the production of telephones.
Ericsson had a sales office in New York City as early as 1902. The plant was built several years later to increase the potential for sales in the American market – which was not realized. The plant was closed in November, 1920 after a long period of large losses.

Everyone can make a green difference

gävle **In four days in mid-February, all of the 2,000 employees of the Gävle plant completed a two-hour course of training. How was it possible? Through the offices of a theater group at the Folkets Hus building in Gävle. The group, consisting of three people, presented two performances a day, for 250 employees per performance.**

The environmental course is part of the project "Environmental management system," the goal of which is to obtain environmental certification in accordance with the ISO 14001 standard, in May 1997. Ericsson invests heavily in environmental projects. The Scunthorpe factory, U.K., was certified in late 1996. The Gävle plant is aiming to become the first production unit in Sweden to obtain the certification.

The project manager is Maud Hansen. The project group consists of eight persons representing various units. About ten environmental representatives have been appointed by the production plants.

Lars-Åke Thunberg explains to Anna Kempe how to sort garbage. An envelope with a plastic window cannot be sorted together with white paper. White paper is returned to the paper factory for recycling. Plastic, on the other hand, is incinerated and becomes energy. Anna is short; her friends call her "Analog" (sounds like the Swedish for "Anna low.") Photo: LASSE HALVARSSON

Everyone can make a difference

Training is important. The advantage of offering environmental training via theater is that everyone receives the same message at the same time. There is a high degree of involvement. Everyone can join in the discussion and begin to act directly.

"Every one of us can affect the environment in our daily life," says Maud Hansen. "Both at home and at work, we can choose to behave in a manner that reduces the environmental load on the planet."

The well-prepared performance was given by Entertainer AB president Henning Christiansson. Assisting him were Lars-Åke Thunberg, primary-school teacher with an interest in theater and environmental issues, and Anna Kempe, who normally works with corporate training and children's theater.

The global environment

The performance was divided in two sessions, each 45 minutes long. The first session dealt with the individual's place in the global environment and in the immediate environment. After an intermission, the second session was presented, dealing with Ericsson and the environment. How are environmental issues addressed within Ericsson and at the individual workplace?

The environment is affected from design up to the point at which the product is to be scrapped. This is called life-cycle assessment.

What should we think about in every phase? The performance addressed the issues of waste product management within the plant and the meaning of environmental certification for the plant. How might we achieve it? What is involved? What is required of each of us? These questions were brought up and answered during the performance.

With the help of mentometer buttons, the audience was able to take an active part in the performance – for example, letting Henning Christiansson discover that 160 of the 250 people in the audience could not imagine life without a car.

Snappy skits

Both sessions included short, snappy and funny skits. These were interspersed with pre-recorded video clips showing, for example, employees discussing what the environment means to them. The factual segments of the videos showed interviews with environmental officers from organizations involved, for example, the County Administrative Authority and the Municipality, and representatives of waste management operations, namely, Stena for paper, Lindberg & Son for metals, Forsbacka landfill and Gästrike waste management (SAKAB).

"All employees have different backgrounds," says Henning Christiansson. "It is important for us to give everyone of them, in an educational fashion, something to take with them. There has to be a red thread through the performance. Insight into the subject develops as the performance proceeds. We do the acting, but the public has the main role. Interaction is the key. Learning should be fun for everyone – that's what makes it stick."

BARBRO ALBREKTSSON

Toward environmental certification 2,000 attend four-day course

Striding toward environmental certification

■ Preparations toward an investigation of the environmental situation at the factory were already under way last autumn. All production aspects were examined and assessed in terms of environmental impact. The most significant were earmarked, and based on them, overall objectives, detailed goals and strategies were then formulated.

All routines are examined and environmental approaches introduced. New routines are added. For example, routines are needed for the handling of all chemical products, and the treatment of wastes. All of the documentation is made available on the Gävle plant intranet, PG-Info.

Original accessories a better buy

■ In April, 500 lucky dealers and distributors will fly to the Mauritius islands. The trip is a prize in a worldwide compaign to promote the use of Ericsson original accessories to mobile telephones.

mauritius

A total of 10,000 dealers in Ericsson Mobile Telephones and Terminals participated in the contest, competing on the basis of their exposure of Ericsson accessories programs in their stores and use of Ericsson products in their marketing. The contest reflects an underlying aim to bring dealers into a closer relationship with Ericsson. The campaign was a great success and has already paid for itself in increased sales of original accessories.

PROPS contract ready for external market

■ Ericsson Infocom AB has signed a contract with the Wenell Group for **karlstad** marketing and retailing of Ericsson's project-management method – PROPS – in the external market in the Nordic region. The contract gives the Wennel Group the sole right to sell PROPS in the Nordic market, with the exception of the telecom industry.

There are several reasons why PROPS is being launched outside Ericsson, not the least of which being that it will spread knowledge of the method further afield, and through increased use result in greater acceptance of it. With more people using the method, feedback will be better which in turn will promote the further development and improvement of the product.

The Wennel Group has sold two licenses to date to Swedish companies. and more customers are pending.

Ghanese GSM net now operating

■ Ghana's GSM net, which is Ericsson's second GSM system in Africa, was recently placed in operation. During an **ghana** initial phase, it will serve the capital city Accra and the port city Tema, with capacity for 8,000 subscribers.

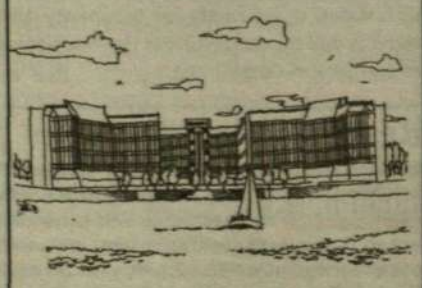
The operator is Scancom, whose majority owner is the Lebanese company Investcom Holding. Ghana's GSM system is being launched under the name Spacefon.

Ericsson Denmark 25 percent larger

■ In January, the Ericsson operations in Denmark launched a major media **copenhagen** and PR campaign under the slogan "We need 235 intelligent people." The slogan referred to Ericsson's plans to increase the number of employees in Denmark by 25 percent this year. The campaign aroused much attention in the Danish press, radio and TV. During the first week, more than 1,300 people responded, requesting a copy of a magazine published especially for the campaign.

People talk about a shortage of engineers in Denmark, but the Ericsson company in Denmark is confident it will succeed in finding the right people.

During a visit by engineering students to the Ericsson plant in Copenhagen, Professor Ove Skovgaard of the Danish university college of engineering said that Ericsson will get the best engineers in Denmark, while its competitors will have to content themselves with second-best.



Ericsson in Copenhagen.

They: he could be a she

■ **Men and women working at Ericsson Components** kista **in Kista, a suburb of Stockholm, are being invited to a series of seminars on the theme of equality between the sexes.**

"We want to involve everyone in equality-promoting measures and create a platform for development and change," explains Karin Täktén, seminar coordinator.

The subjects up for study are: "the art of being your own leader," "feminine/-masculine: crisis or opportunity?," "hearing and being heard," "networking," "vision," "creativity." Eighteen opportunities to study these subjects in depth will be given during the winter and spring period.

The seminar leaders are Monica Chu and Towe Wistrand.

Broadband access in your home

■ "Broadband access for the home – utopia or real life." This was the theme of a seminar arranged by Jan-Erik Lennefalk of the Depart-
kista
ment for Strategic Marketing at Ericsson Components in Kista. The seminar spotlighted the subject of broadband access, incidentally creating contacts between customer and supplier. The study "2005 – Ericsson entering the 21st Century" was presented by Mikael Edholm of Ericsson Radio Systems. Also on the program were Gustaf Brismark's discussion of fiber technology for the home, and the joint presentation given by Sven Sjölinder and Piotr Korolkiewicz of high-performance copper conductors.

Eight Jumbo Jets to China

■ On November 7 last year, Ericsson received an expansion order from the province of Guangdong in Southern China. It required the
airborne
shipment of 800,000 kilos of equipment to Guangdong before the year-end, so that the network could serve 1.4 million more subscribers in time. It worked – thanks to extraordinary efforts from all personnel involved. The capacity needed was not available within the regular departure scheduling, so Ericsson was forced to charter eight Boeing 747s to get the job done.

Espionage?

■ Did you know that the most frequent visitor to the Ericsson web pages on the Internet is our competitor, Nokia? The corollary is also
cyberspace
true: Ericsson displays great interest in its competitors, Nokia, Nortel and Motorola. Did you also know that there are special home pages for Internet addicts? A search on the word "webaholics" using one of the Internet search engines yields 400 hits, the first with the title "Hi, I'm Larry. I'm a webaholic."

Ericsson Denmark in cramped quarters

■ Ericsson's Danish companies are strapped for space in the Nauticon building on the Sluseholmen island in Copenhagen. The company
copenhagen
has been searching for new premises in the south-central part of the city, to relocate 200 employees. Two departments of the T Division plus the entire Customer Services organization will move there in June, when the building is slated to be ready for occupancy. Until that time, temporary premises will be erected near the Nauticon building, the main Ericsson complex in Copenhagen.

Roger's big idea was profitable!

Roger Glimsjö has been named "Suggestion Box Proposer of the Year" linköping **in the Linköping plant, where he has been engaged in maintenance and technology for two years. Roger proposed that a new "milling plate" be used with an IHX robot. His proposal earned him SEK 92,000, plus an additional SEK 15,000 for being named "Proposer of the Year." A milling plate is used to keep printed circuits and machines free of milling dust.**

The gang that started sorting packaging to improve the environment: Peder Eriksson, Caroline Paulsson, Theo Assouchidis, Thomas Bolom, Pedro Santana, Thomas Nilsson, Edward Rodzon and Karin Wretström.

Points for improvements

■ "Constant improvement" is a process that has resulted in concrete improvements in the Ericsson Radio Access AB plant in Kista, a Stockholm suburb. All personnel groups in the plant have
kista
come up with suggestions that have contributed to cutting manufacturing costs, enhancing the work environment and reducing waste of resources.

"Constant improvement" is a continuing process that gives everyone the opportunity to influence the work environment. It is an approach within TQM (Total Quality Management) that supports other production philosophies. Every suggestion submitted is worth points if it is approved. That is, if is within the area of the operations, is feasible and represents an improvement that is financial justifiable. When the improvement has been implemented, its inventor gets three more points. When the group has eight points per person, everyone receives a premium.

"Who makes the suggestion is not important," says Erik Blomqvist, project manager at the Kista plant. "Group work is what counts. We have received many excellent suggestions for improvements, suggestions that are environmentally sound, reduce costs and enhance the work environment."

"A lot of people are interested in 'constant improvement.' Within two months we've received 318 suggestions, 142 of which have been implemented," says Lars-Gunnar Andesson, production manager. "We're very pleased and I hope that peoples' interest continues. Every three months, we send the group that has accumulated the most points on a conference trip."

Karin Wretström, who is part of a group that assembles circuit boards, spawned the idea of recycling the packaging that transistors are delivered in. Karin thought it seemed a waste to throw out all that packaging, and that it would be better to return it to the supplier.

"After talking about it, we concluded that everyone in our group could sort the packaging, which could then be husbanded and recycled," Karin relates.

KARIN RONANDER

Getting used, in more ways than one

Since the end of last year, the Ericsson Radio Systems plant in Nynäshamn, Sweden, has assigned eight
nynäshamn
people the job of ensuring that components that would otherwise be scrapped are recycled. "We recycle products used in antenna-related production that have been discarded for one reason or another," explains Svein Öyangen, coordinator of the new unit.

The group has dismantled about 1,600 filters and saved a lot of money by recycling directional coupler, lids, couplings, bushings, housings, connectors and mounting plates, instead of letting them wind up on the scrap heap.

The unit also sorts material that cannot be recycled.

"This operation serves two purposes," says Svein. "On the one hand, we're recycling expensive components into our products, on the other, employees who are tired of their work get the chance to try something new."

"We're making good use of our human capital," Svein stresses.

Lena Pedersen is one of those who have opted to work with recycling. She has worked in packaging since the end of the 1980s, and when the company announced it was looking for people, she saw her chance.

"I had come to a point in life where I wanted to try something new," Lena explains, adding that she was so desperate she would have taken anything.

She finds her new job fun, and is a staunch supporter of the idea of recycling.

Svein Öyangen at the Nynäshamn plant is in charge of recycling components from discarded products.

"The group does a lot of talking about quality," says Lena, who makes no bones about the fact that the quality of the filters she dismantles could be better.

Today, these quality problems have been solved.

The Ericsson plant in Nynäshamn, with approximately 700 employees, manufactures products for base stations and mobile data systems. The plant belongs to Ericsson Radio Systems and is part of the rapidly growing business area Mobile Systems.

An example of the hidden skills of our designers. Above, Alf Fredvik (Ericsson Norway) demonstrates how the dial of the "Cobra" telephone worked. In the small photo, below, a comparable team in Rome displays its "Communications" collage. From left: Stefano Ruffini, Alessandro Arboletto (both from Ericsson Italy), Arne O'Shea (Ericsson Ireland) and Björn Sundelin (Ericsson Utvecklings AB).

Dial for art at the start

Ericsson's Utvecklings AB is in the process of developing a new construction package for AXE that is to be launched within a year. The first stage of the program comprises 12 different development projects – three of which were combined – and got under way at the end of January.

rome

The design work has been divided among Ericsson companies in Sweden, Norway, Finland, Italy and Ireland. So it was natural to choose an Ericsson theme for the "team-consciousness" half of the kick-off day in Sweden.

Each of the six teams that assembled in the dark of evening outside the Flottsbro exercise center in Stockholm suddenly found themselves before a huge block of snow. Their assign: To shape it into one of the company's classic telephones, from the old desktelephones from the 1800s to the "GH 388" of 1996.

"I am overwhelmed by the creativity these 60 Nordics showed," said project leader Kristina Fuhrman when the results had been photographed for posterity. "If we can make such fine telephones out of snow, we should be able develop the new signal platform, the new exchange terminals and a new signaling system for number 7." she added.

On the spot in Rome

For practical reasons, Part II of the kick-off took place in Rome. And the same high level of creativity was exhibited there as Italians, Swedes and Irish went off on a "photo safari" to illustrate professionalism, respect and perseverance, plus a few other shared values essential for the project. The photo above illustrates a collage on the theme

"Technology" that was created by the fourth of seven groups. This creative team consisted of two Italians, an Irish lady and a Swede.

En route home from Rome, our snow telephones were visible from the air as we made the approach to the landing at Arlanda.

Rather simple materials can be used to send a message quite a distance – in this case nearly 5,000 meters!

NMT in Visby: Full steam ahead

■ "The Visby plant is currently heavily engaged in building up the NMT base-station manufacturing operations," project manager Tryggve Lindlöf relates.

visby

The surface mounting has begun, involving printed circuit board assembly for transceivers, where Ericsson Radio Access was instrumental in designing the new version, called "Puma."

Some 30 persons are already at work on test and assembly routines on the circuit-board and transceiver level. Engineers from Lindköping and Visby are compiling the system-testing routines for the NMT 450 base station.

"So many details have to be right for everything to work. The baptism of fire will come in early March, in the form of a delivery to a customer in the Netherlands.

Paul Rivas holds up one of the transceivers on the 450 system channel tester.

"On thing new here in Visby is that the customers come to the plant and inspect their base station before it is delivered. We will also provide training courses for customers here at the Visby plant," Tryggve Lindlöf explains.

DHL mobilizing mobiles

■ In a joint venture between Ericsson and the DHL courier company, a new regional logistics center has opened in Singapore. Its purpose will be to handle the transportation of GSM telephones needing repair or exchange, in Asia and the Pacific-rim area. Faulty telephones can be exchanged at the logistics office and it will then forward them to Malaysia, Australia or Sweden for repair.

singapore

diary

Per – A globetrotter in electronic standards

Per Andersson is an expert in optical-fiber communications in the Fiber Optic Research Center at Ericsson Components. He works most days on the standardization of optotechnology, dealing primarily with the ITU (International Telecommunication Union) and ETSI (European Telecommunication Standards Institute). His workplaces: Kista, Kungens Kurva, Geneva and the rest of the world.

Monday. ETSI standardization meeting, Vienna. Discussions on research project dealing with "fiber to the home" (FTTH), project presentations, draw pictures.

Deadline for standardization contribution to ITU is Friday. Conduct an e-mail discussion with colleagues at Kungens Kurva about contributions.

Have received GSM card for my new GH388, but don't have time to test it at work. Stick it in briefcase for test at home. Once I'm home, I'm a bit confused. Telephone says "Insert card." But the SIM card doesn't fit.

Tuesday. More FTTH. What is needed in fiber optic links to the home? How do you go about the job? Which technologies are needed?

Call to Telia. Soon clear that I got the wrong GSM card. They'll send another one by Friday. Technician lets slip that you can cut off the gold pattern on the large "credit card" but that you have to be careful. I'll wait until Friday. Update my web site on optical standards one last time after last week's ETSI meeting. Send in my report on ETSI meeting. Report-writing is now done in real time, directly from the meeting and directly in html editor. At the hotel following the meeting, you set up any links needed, add a little comment in the "what's new" section, check the site, and download via modem to the server.

Wednesday. Received an electronic version of a preliminary standard for access networks from BT. To be converted and stored on web site. Learned that our proposal to ETSI last week was approved at plenary meeting and will now go to ITU with ETSI's support.

Answer an e-mail from U.S. on laser chip modulation, a subject I was an expert on once upon a time (last year, or thereabouts...) Unfortunately, no one ever succeeded in solving the theory behind the problems; instead, the end result was simply measured. And so the lasers were rebuilt so that the problem diminished. As expected, system demands increased again in a few years, and the problem is popping up once more...

Begin to purchase tickets for trip in two weeks to Optical Fiber Conference in Dallas. American Airlines may go on strike. Get a terrible routing via British Airways instead. Five-hour layover at Heathrow. Equally hard to get an hotel room.

Thursday. Discussed ITU contribution, tactics and strategy. One gets the impression at meetings that most organizations have a very cynical, short-sighted attitude toward standards. It's not until they have built half of a system that they begin to appreciate the danger that a standard will say something other than what they are building. By that time, the investments are high and margins for error are small.

Since I am in a research department, I have sometimes also dealt with a number of longer-term issues. The advantage is that you may be able to coordinate things before beginning to fight for market shares or defend system designs. The disadvantage is that no one really wants to make a decision about anythin.

Friday. More standards. Standardization work is well advanced in the opto area. As a result, there is widespread uncertainty about which systems really will be built, where they fit in, and which technical solutions are relevant.

Some of the discussions are recognizable from the research world and the large American and European test projects. Other discussions show that small companies can quickly develop solutions that they later promote as standardization proposals without any pretenses.

Received my new GSM card. What a difference. Works perfectly.

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. 2 1997 **Updated February 24**

Ericsson Radio Systems AB, Kista

OPERATION DEVELOPMENT

● Supply Management at RMOA is looking for you who want to work with operational development in Supply. We work in a continuos improving area, and need to focus on this both in the processes and in the line-organization. Supply Management is the owner of the TTC processes Supply and Supply Planning. We are redesigning these processes, and globalizing them. Your work will be to implement and ensure the efficiency of the processes as well as to improve our way of working.

You are experienced in operational development and with the process-philosophy. You are fluent in spoken and written English, communicative and have a true interest in people and networking.

Contact: ERA/AP Stefan Holmqvist, 08-404 7312. Application: KI/ERA/A/H Britt Bosrup, Ericsson Radio Systems AB, 164 80 STOCKHOLM

Ericsson Radio Systems AB, Kista

QUALITY

● We are looking for you who want to work with quality-oriented questions at RMOA Supply Management. The work includes finding new quality methods to ensure manufacturing-quality from a RMOA perspective, to initiate audits, improve out of box quality, find methods to feed back field-data to our suppliers, etc. You will work in an international cross-functional team.

You have a master degree, talks and writes English fluent, are team-oriented, and are used to MS-office and other IT-tools.

Contact: ERA/AP Karin Svingby, 08- 404 5225. Application: KI/ERA/A/H Britt Bosrup, Ericsson Radio Systems AB, 164 80 STOCKHOLM

Ericsson Telecom AB, Telefonplan

MARKETING IN KOREA

● If you have experience of marketing products for the Public Networks and think that is a great job, why not do it in Korea?

Korea has today a high developed telecommunication structure and there are many new companies aiming for telecom businesses. This is leading to many new opportunities for us, which we would like you to make business out of ...

You will be based at our company (EKK) in Seoul and you should have a good knowledge of BN/Public Networks products, especially in the area of access products and network intelligence. You will work close with our local staff and together you will find out about our customers needs and suggest suitable solutions. It will also be important to strengthen the work of communicating customer needs to the product supply units.

Interested, I thought so ...

Contact: HF/ETX/BF Kjell Yving or ETX.ETXELLY 08-719 4765.

Ericsson Radio Systems AB, Kista

AREA SALES MANAGER – AUSTRALIA AND NEW ZEALAND

Cellular Systems - American Standards is one of the fastest growing business units within Ericsson Radio Systems. We are the market leader for cellular telephone systems and services based on D-AMPS/AMPS. Today, over 50% of the world's subscribers are served by D- AMPS/AMPS systems.

● We are now looking for a experienced, energetic and ambitious individual that is ready to take up one of the greatest challenges our unit faces this year - the 800 band auction in Australia. The work will involve full commercial responsibility for the business towards new operators that are prospects in the auction.

Main responsibilities and tasks: Find and go for prospects. Be responsible for the marketing and sales of our solutions; from creating business cases, doing quotations and finally participating and concluding the negotiations. Co-ordinate activities with the global operators. Frequently visit customers as well as the Local Company. Support the Local Company together with commercial and technical expertise.

The candidate should have the following qualifications: System sales experience in an international business environment. Experience within cellular. Completed university degree, M. Sc. or similar. Strong perseverance. Fluent in English.

Contact: Torbjörn Sandberg, 08-757 09 64. Application: Ericsson Radio Systems AB, AH Birgitta Stavenow, 164 80 Stockholm

Ericsson Radio Systems AB, Kista

AREA MANAGER – LATIN AMERICA

Around the world, wireless and PCS markets are growing rapidly. D-AMPS/AMPS systems today serve over 50% of the world's subscribers. Our mobile telephone system, CMS 8800, is the world's most sold system, all standards considered.

● We are now looking for an ambitious colleague as Area Manager for specific customer accounts in different parts of Latin America. We can offer an interesting position in an expanding business. You will be responsible along with our local company for fulfilling our high customer expectations in following areas:

Marketing and sales activities towards one or more customer accounts. Consolidated sales and order intake from the accounts. Establishment of a long-term partnership between our customer and Ericsson and to ensure excellent customer satisfaction.

This position will give you a wide understanding of our business development and company strategies.

Qualification and experience:

The applicant should have a university degree (M. Sc., MBA or similar). Excellent English and Good Spanish and/or Portuguese.

At least 3 years working experience and ideally 2 years in telecommunication industry and international business. Ability to build excellent relations and drive for results.

We will offer you a stimulating working environment in a small team with the potential for good personal development.

Contact: Annika Eriksson, +46 8 7571628 or Björn Berndtsson, +46 8 7572232. Application: Göte Hedblom AH, Ericsson Radio Systems AB. 164 80 STOCKHOLM.

Ericsson Radio Systems AB, Kista

RMOG Resource Agency is a unit within ERA/L, responsible for supporting the market units and local companies worldwide, in their efforts to secure operations personnel.

GLOBAL RESOURCE CO-ORDINATOR

● JOB PROFILE:You will be allocating and co-ordinating resources within operations, mainly long term assignments, among our various subsidiaries. You will also help build up and support a big contact net world wide.

REQUIREMENTS: Customer oriented and able to establish good relations with old as well as new customers. Result oriented and able to work independently. Good knowledge of English. Experience of HR. Ericsson experience is a must.

Contact: Lars Ander, phone +46 8 4045252, memoid ERAC.ERALSAR eller Ritu Malik, phone +46 8 4046786, memoid ERAC.ERARIMA.

Ericsson Radio Systems AB, Kista

SUPPLY STRATEGY

● We need to strengthen our work with RMOA Global Supply Strategy. This is done with a focus on market demands and with a logistic view. You will participate in discussions, decisions and implementation in questions of establishing new manufacturing facilities or locations of new external first line suppliers. You will also focus on new products influences on the strategy.

You are fluent English spoken, and are experienced in global logistics and supply. You are also familiar with the coordination of global manufacturing.

Contact: ERA/APC Ann Bäckman, 08-404 5601. Application: KI/ERA/A/H Britt Bosrup, Ericsson Radio Systems AB, 164 80 STOCKHOLM

Ericsson Radio Systems AB, Kista

SYSTEM SUPPORT ENGINEER

● This position will analyze, plan and implement methods of improvement toward the Technical Assistance (TAC) and Field Support Centers (FSC) throughout RMOA markets. To prepare and coordinate seminars for the (M)LC's will also be a part of the job.

Candidates should have extensive System Support background within the Ericsson Group, Cellular in particular. Knowledge about the MSS is an advantage.

A Master or Bachelor degree in Engineering/ Telecommunication or equivalent experience. Travel is required as the position covers RMOA global customers.

Contact: Jim Kirst, phone +46 8 404 8325, memo ERAJAKI or Rolf Johannesson +46 8 404 3820, memo ERARRRR. Application: Ericsson Radio Systems AB, AH Marianne Molin, 164 80 Stockholm.

WIRELESS INTELLIGENT NETWORK SERVICES

● To our department in Kista we are looking for candidates with WIN experience to work with customer support issues.

You are confident with the WIN services and familiar with the software applications as well as the hardware required.

You will support our customers and our MLC/LC with WIN assistance focusing on the after sales support area. You must be prepared to manage international contacts and travel from time to time. Additional knowledge in D-AMPS/AMPS network solutions, SMAS and HLR is an advantage.

Contact: John Glimtoft, tel 08-4046916. Application: Ericsson Radio Systems AB, AH Marianne Molin, 164 80 STOCKHOLM

Ericsson Telecom AB, BA Infocom Systems, BU Public Networks, Switching, LDC Systems Design and Integration, TN.

SYSTEMS MANAGEMENT XD/S

● Do you want to contribute & learn about next coming projects in Public Networks?

We need people that would like to work with technical studies & system co-ordination for our 'star' projects.

If you have experience from work with several subsystems, testing and/or the APZ platform, it is preferable.

Contact: Monika Swensson, Phone: 08-7194721, Memo: ETXSWE; Per Öberg, Phone: 08-7195412, Memo: ETXPOEB or Susanne Borg, Phone: 08-7196575, Memo: ETXSUBO.

LM Ericsson Ltd, Ireland

PROJECT MANAGER

Recent organisational changes and the emergence of new business prospects has created a vacancy for a Project Manager in the Business Area Switching. Business Area Switching is responsible for Marketing of Fixed Network Switching, Intelligent Networks and Services, Signalling and value adding services towards Telecom Eireann.

● The responsibilities of the Project Managers position includes positioning of the Ericsson solutions, identifying opportunities, fulfilling business needs, and ensuring a high degree of customer satisfaction. In addition, the position shall facilitate the delivery, implementation and support of solutions by contracting to the appropriate business support functions in Ericsson.

The ideal candidate shall have a technical degree and up to 4 years experience in one of the technical areas. Specifically, we seek a creative and visionary person, self-starter and enthusiastic, with a view for fulfilling customer needs.

Based in Beech Hill, Clonskeagh, this varied and challenging position offers exciting career prospects combined with the opportunity to strengthen and develop the Business Area Switching Function.

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

Applications are invited from those who consider that they can meet the above criteria. Applications should apply in writing signed HR/-97:0252, enclosing a comprehensive Curriculum Vitae to the undersigned before Friday 7th March, 1997.

Contact: Margaret Gaffney, Personnel Officer, LM Ericsson Ltd., Beech Hill, Clonskeagh, Dublin 4, Ireland.

LM Ericsson Ltd, Ireland

PRODUCT DEVELOPMENT OPPORTUNITIES

A new department has been set up in LMI to pursue emerging product development opportunities in the area of business support systems for telecom operators (Billing & Customer Care, Mediation, Fraud Management etc).

● A small number of vacancies have been created for engineers to work in an IT software design and development environment. The team will face the challenge of implementing, from scratch, the complete product development life cycle from specification and architecture design through to implementation and system test.

A combination of some of the following knowledge areas is required: Client / Server and distributed architectures. Object oriented design. Windows / Unix programming (C, C++, VB etc). RDBMS modelling and administration. Networking (X.25, Ethernet, TCP-IP, SS7 etc). Rule based expert systems / neural network techniques.

The ability to contribute individual skills to a working team and to develop broad technical and personal strenghts is central to the requirements on the successful applicants.

A computer science or other relevant technical qualification is preferred, but applicants with alternatively sourced abilities to contribute will be equally welcome.

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 signed HR/-97:0298, enclosing a comprehensive Curriculum Vitae to the undersigned.

Contact: Margaret Gaffney, Personnel Officer, LM Ericsson Limited, Beech Hill, Clonskeagh, Dublin 4, Memo ID LMIMGY.

Ericsson Radio Systems AB, Sundbyberg

BAHRAIN – INFOCOM SYSTEM AND MOBILE NETWORK, MARKETING AND SALES

Ericsson has been an active system supplier to Batelco for more than 15 year.The growth potential in Bahrain is increasing in the area of Infocom System and Mobile Network.We intend to secure this opportunity and are looking for an experienced person to work with Marketing and Sales in Bahrain.

● The right person should have previous experience from sales and marketing activities within Ericsson,preferably from the product areas of Infocom System and Mobile Network.Your work includes offers,negotiations,contract management,customer presentations, marketing communications etc

You will be in almost daily contact with the customer, on different levels, and need to be both creative and flexible to ensure that the customer remains satified

You will work with a dynamic customer and in a stimulating working environment.

Contact: Haakan Johansson, Bahrain. Phone +973-532443; Anders Eriksson,ETX/X/BM.Phone +46-8-7192629 or Gunnar Matto, ERA/LP/FOC Phone +46-8-7573318. Application: Anita Malmstrom Wallner, SG/ERA/LP/H. Phone +46-8-4042429

Ericsson Mobile Communications AB, Tokyo-Japan

PRODUCT ADMINISTRATOR

Ericsson Mobile Communications AB is currently developing its first generation of PDC cellular handheld telephones for the Japanese market. We are

now starting to build our Product Support and are looking for a Product Administrator.

● The Product Administrator will coordinate activities and be responsible for the development of the function within the Product Support group. Functions include:

Product Administration: Build and maintain/update product databases. Administer various distributors and operators demands for special requirements on product labels. Create product lists and structures. Assist Product Management with product variations routines. Compile/distribute monthly DPY level and project status reports Customer Satisfaction and Competitive Analysis. Work with designated partners to determine product research information Customer Support. Handle various support issues to the marketing groups, sales companies and customers.

Candidates should possess degree in business, communications or similar areas of study. International experience or experience working with a foreign company is an advantage. Good in English, both verbal and written. Good skills in database programs.

Contact: Karen Wendt +81 3 3222 4331, memo-id EUS.EUSKAWE Application: Ericsson Mobile Communications AB, ECS/HS Christina Weisner, 164 80 STOCKHOLM

Ericsson Ltd, Public Systems Division, UK

LOCAL PRODUCT MANAGER - ICO

In the Local Product Management at the Mobile Business Sector, Public Systems Division (ETL/XM/X) we are working towards various mobile cellular operators in the UK. We are currently working on a technical definition contract with a new and very exciting customer called ICO Global Communications.

ICO Global Communications is backed by the Inmarsat co-operative and enjoys the support of 47 major international investors on six continents, including many of the world's principal telecommunications operators. The full ICO network, with 10 operational satellites and 2 spares, will provide partial service from 1999 with global coverage soon after. Part of ICO's policy is to aim for the closest possible alignment with GSM and using dual mode handsets.

A consortium led by NEC and including Hughes Network Systems and Ericsson has recently won a contract to carry out the technical definition work for the ground segment facilities or SAN/NMC (Satellite Access Network/Network Management Centre).

● In order to support the ICO account, we have an immediate position for a highly knowledgeable Technical Consultant / Local Product Manager.

The responsibilities include analysis of requirements and preparation of Requirement Specifications, conduct technical presentations, hold technical discussions/negotiations with ICO as well as the other members of the consortium, review contracts, evaluate commercial considerations, prepare Statement of Compliances, specify product contents and answer technical questions to both internal and external customers.

An interest and the ability to understand the customer's requirements is essential.

You should have at least 3 years of experience in CME 20/CMS 40 with the main focus on switching. Knowledge of Product Management, Intelligent Networks and telecom networks in general will be meriting. You should be looking for challenges rather than seeing problems, be outgoing and driving and have excellent communication skills including verbal and writing skills in the English language.

If you are looking for a real challenge in the new and exciting field of GSM based cellular satellite communication, then we can offer you an interesting opportunity in a creative and inspirational assignment for a minimum of two years at Burgess Hill in West Sussex UK.

If you feel you are the right candidate for this position and/or have any questions regarding the position offered, please

Contact: WC4/ETL/XM/XC Thomas Bystedt, tel. +44-1444-234389, memo id. ETL.ETLBYST

Nippon Ericsson K.K., Tokyo, Japan

WIDEBAND CDMA / ATM DEVELOPMENT

Ericsson's Major Local Company in Japan, Nippon Ericsson K.K.(NRJ), has recently made an offer to deliver Wide-band CDMA (WCDMA)/ATM experiment-system equipment to NTT-DoCoMo, one of the world's largest mobile telephone system operators.

The wideband cellular systems unit at NRJ will have the customer interface responsibility for this experiment system, as well as the responsibility for Ericsson's third generation cellular systems standardisation activities in Japan in general. This unit is now expanding and is therefore seeking new, highly qualified personnel.

This is a unique opportunity to work together with one of Ericsson's largest and most demanding customers in developing the first WCDMA/ATM cellular system in the world.

BASE STATION ENGINEER

● The main tasks will be local product management and participating in the specification of the Base Station (BS) for the WCDMA/ATM experiment system. This includes BS controller (application program interface), BS-to-switch interface and operation & maintenance functionality. The work will involve close contacts with the customer, NTT-DoCoMo, as well as with the Ericsson organisations responsible for the development of the system.

The position also includes being active in various third generation cellular systems standardisation bodies in Japan.

NETWORK PROTOCOL ENGINEER

● There is now a position open for an engineer with good knowledge of the network protocols MAP (GSM, PDC or IS-41) and INAP. Additional knowledge of e.g. (B)-ISUP, Q(2)931 and TCP/IP protocols is advantageous. The main task is to specify the network interfaces for the Future Public Land Mobile Telecommunication System, FPLMTS.

You will be the one driving the work forward, although it also involves a lot of co-operation with colleagues. The results will be discussed with our Japanese customers (primarily NTT-DoCoMo) and will also be input to relevant standardisation bodies (mainly TTC in Japan and ITU-T internationally).

REQUIREMENTS: For the above positions, the applicant should have at least five (5) years of experience in working with R&D and/or product management within Ericsson in fields relevant to the position. A very good conduct of the English language, both oral and written, is also an absolute requirement. It is highly desirable that the applicant has power of initiative, as well as good team-working and communication skills.

Contact: J'rgen Lantto, General Manager WCS Prod Management, Phone: +81 3 3222 4337, MEMO: NRJ.NRJJXX, E-mail: jorgen.lantto@nrj-t.ericsson.se or Nils Enstam, Manager Expat administration, Phone: + 81 3 3221 8291, Mobile: + 81 80 966 11 63, Fax: +81 3 3221 8202, Memo: NRJ.NRJNREM, E-mail: nrj.nrjnrem@mesmtpse.ericsson.se. Application: Nils Enstam via fax, memo or E-mail.

"Leading stars in the service control area!"

Ericsson Radio Systems AB are looking for Systems Managers.

The Product Unit "Digital Switching Systems and Applications", (DSA), provides competitive switching, service control and application products to GSM/DCS/PCS operators through Ericsson/RMOG marketing and sales channels.

The product area Service Control and Management (SCM) is responsible for nodes controlling services in the network like the HLR (Home Location Register) in GSM. In addition to own products, SCM is responsible for the DSA requirements towards "external" products like the IN infrastructure, SCP (Service Control Point) and SDP (Service Data Point). In the central system management for SCM we are now looking for:

Systems manager, Mobile Intelligent Networks (MIN)

We are extending our System management team for Mobile Intelligent Network (IN) platforms. We currently see big opportunities in new products based on open architecture as well as solutions supporting telecom and datacom applications.

— Your work will consist of tasks like technical studies, support to internal and external organisations including customer presentations and market support. You will also build a broad technical competence in the area of IN.

You will probably have a couple of years of relevant experience (IN, GSM or similar) and would like to work as a generalist and co-operate with a big contact network. You are used to take own initiatives and enjoy working within a unit where new tasks constantly comes up.

We are also looking for experienced engineers or similar to strengthen our GSM systems management for SCM to the following positions:

System Manager/Senior Specialist, Service Management

With the introduction of new services and network elements within the GSM/PCS solutions and at the same time the rapidly increasing number of subscribers in our customers networks the need for efficient support for service management increases.

We consider knowledge about UNIX platforms and management systems as a merit.

System Management GSM&PCS

The positions are in the area of technical co-ordination/prestudy management, technical investigations, network architecture and standardisation for the GSM/PCS development. Introduction of new features and application like IN, data- and business communication for the GSM/PCS networks are the key drivers for our work.

Experiences from AXE and other platforms, as well as leadership in line or project work are a merit.

Ready for a challenge? Please contact:
Anders Blomgren, phone +46 8 757 12 81, ERAC.ERAABLO
Ulrika Carlsson, phone +46 8 757 13 13, ERAC.ERAUCAR
Erik Lönnheim, phone +46 8 758 12 80, ERAC.ERAERLO
Human resources contact is: Kjell Gunnar Königsson, phone +46 8 404 79 46

Send your properly marked application to:

Ericsson Radio Systems AB
LK/HS Mia Hjertén
164 80 Stockholm

e-mail: erac.eramihj@memo.ericsson.se

Ericsson's 90,000 employees are active in more than 130 countries. Their combined expertise in fixed and mobile networks, mobile phones and infocom systems makes Ericsson the world-leading supplier in telecommunications. You can get more information about us on our homepage **www.ericsson.se/SE/**

ERICSSON

Ericsson Mobile Communications AB, Kista

PRODUCT MANAGER MOBILE PHONES - JAPAN

In 1997 Ericsson Mobile Communications AB will introduce it's first mobile phone in the Japanese market.

● Our Product Management in Tokyo leads the product planning aimed at the Japanese cellular market. We need to strengthen our group with a Product Manager for Mobile Phones.

Japan is one of the fastest growing markets as well as the leaders in consumer goods technology and mobile telephony. Japan is regarded as a very important strategic market for Ericsson. So we offer you a challenge. You will have the opportunity to follow the latest technology breakthroughs in the electronics field closely.

Your areas of responsibility will include commercial product management, understanding and taking care of end user product requirements, and business case studies. Together with our joint venture company you will also have frequent contacts with our customers. You will work very closely with the development projects including Marketing, R&D, Logistics, Service, Manufacturing, Procurement and Business Management. It is important that you are a team player, believing in sharing information and ideas.

You must possess good English communication skills, have a strong customer focus, be business oriented, prepared to make important decisions, and be able to assimilate into the job and the Japanese culture quickly.

Candidates have a university degree in Economy, Finance, MBA, or a M. Sc. Degree. Experience of marketing (consumer products) and a good understanding of user needs is required. Previous experience of product management of mobile phones is preferable.

An expatriate contract is offered for this position.

Contact: Magnus Ericsson, phone +81 3 3222 4331, memoid ECS.ECSMER. Application: Ericsson Mobile Communications AB, ECS/HK Yvonne Areflykt, S-164 80 STOCKHOLM.

LM Ericsson Ltd, Dublin

Will you Accept the Challenge?

● Do you have experience of analysing information needs of end-users? Have you the ability to detach yourself from the common way of thinking and looking at problems? Are you customer - orientated? If you answered yes to the above questions, you are the person we want.

The LMI SD&D Centre is seeking a person to fill the position of Information Designer. We work with service development based on Ericsson's Network Intelligence (NI) environment. As a section member, you will be working in projects with service designers, systems engineers, and programmers. You main tasks will be to support the SD&D's information design needs, with a focus on user's guides, system administrator's guides, GUI design, and software usability aspects of the SD&D products. There will be opportunities to work with multimedia, the WWW and marketing.

You should have excellent writing skills and it is expected that you will know how to make text and graphics interact effectively. The ideal candidate should be able to write technical information oriented to the user's understanding rather than the designer's. You should also possess an excellent knowledge of publishing tools, particularly Framemaker.

An engineering, computing or telecommunications qualification is preferred, but applicants with other relevant qualifications, such as graphic design, are also very welcome. We invite applications from experienced information designers, but backgrounds such as training, translation, and engineering could be equally suitable.

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

Applications for the above post should be sent in writing enclosing a detailed Curriculum Vitae to the following.

Application: Margaret Gaffney, Personnel Officer, LM Ericsson Limited, Beech Hill, Clonskeagh, Dublin 4.

Ericsson Systems Expertise Ltd, Ireland

EXPERIENCED SOFTWARE DESIGNERS

In Athlone, Ireland, Ericsson Systems Expertise Ltd have the following opportunities for experienced Designers in our Network Design Division.

GENERAL Projects: Successful applicants will work in small teams on Fixed Network Projects, TG1 - TG4, in the NOP and Access areas. At least 3 years experience in Systems, Sub-Systems is desirable. You will be leaders in CMM/ESSI issues and familiar with current Design Toools/Processes. You will have extensive experience in Basic and Function test.

PRODUCT AND PROJECT SERVICES (OMS, NMS, SLM)

● There are also limited vacancies in an area that has 'Best in Class' performance. You will work in a team based environment supporting a worldwide customer base, on all Source Systems issues, within Fixed and Mobile Networks.

Typical tasks will include the following: Proactive advice on Product improvements. Product Development support within Projects. Trouble-Shooting on Customer/Test Sites. Supporting the provision of high Quality solutions to to operational faults.

EXPERIENCED FUNCTION TESTERS/SYSTEM TESTER

● We require Senior Engineers with 3-4 years experience in Function Test, capable of defining and developing the Function Test strategy for the Division e.g.

Analysis and evaluation of FT processes, being a key initiator of process improvements. Active participation at inspections/reviews of all FT documentation across all projects. Definition of key competencies required in FT over the next 5 years. Propose/plan how this will be achieved. Ensure effective and efficient usage of all STPs. Encourage and champion the use of test tools in all projects.

We also require a System Tester/Experienced Test Professional with 4 to 5 y ears plus experience in SoftWare Testing. Ideally this should cover multipl e platforms and multiple phases.

EXPERIENCED DB DESIGNER

● We are undertaking a major investigation into migrating the Statistics and Traffic Measurement Subsystem (STS) to a new platform, the Adjunct Processor (AP) platform. This will invlove using commercially available relational Database systems, in conjunction with commercially available SGL-report writing tools, to define faster and more accurate data to our customers, in a format immediately useable by them.

We have an immediate need for an experienced Data Base Designer, with substantial experience in the Data Modelling area, preferably using Sybase or Oracle, in a Unix environment.

We offer a starting contract of 1 years duration with the possibility (expected) to extend for a further year.

All the above positions are available either on contract or local employment conditions.

Contact Michael McGann at +353-902-31258 or on Memo EEI.EEIMMG or Email EEIMMG...EEI.ERICSSON.SE

Ericsson Corporatia AO, Moscow

FIELD SUPPORT MANAGER TO MOSCOW

● The FSC manager position at BX (BN) Field Support Office in Moscow will become vacant in May 1997 and we are now looking for a successor.

There are currently 40 exchanges in service in the Russian fixed network with a total of 8 AS. The number of exchanges is expected to grow significantly during the coming years. Quite a few of the exchanges in service from the late 80:s with a P83 base and some 15 exchanges are 08 based with P86 technique and the latest AS now starting to roll out in volumes is 12.3 based. Second line support at ETK/Zagreb.

A major challenge for the support office during 97 will be to handle the increasing number of exchanges, to increase the resourses significantly, the establishment of 2 regional support offices and to cope with a number of AS changes from 08 —> 12.3.

We expect the new FSC manager to posess several years of FSC experience abroad and we expect the following qualifications: good knowledge of BX/FSC routines and procedures, previous position as FSC manager abroad, leadership ability, wide contact network within the Ericsson group, strong TSS skills (both conventional signalling and CC7/ISUP), 12.3 experience prefearable, excellent written and oral English skills, russian speaking prefearable but not an absolut requirement.

Responsibilities: Perform required management and functions of the unit. Ensure the efficient running of the system support activities in the region. Maintain staff levels according to the resource budget and the actual/ forecasted workload.

Develop and maintain the required staff competence levels. Achieve the unit's objectives. Achieve and maintain customer satisfaction with external and internal customers. Establish and maintain good customer relations. Start of the assignment ASAP.

Contact, technical issues: Matts Kangas ECR.ECRMAKA, tel. +7 095 247 6211, ECN 835 228, fax. +7 095 258 4004, ECN 835 350. or Vladimir Smolcic ECR.ECRVLSM, tel. +7 095 247 6211, ECN 835 468, fax. +7 095 258 4004, ECN 835 350. Application: Lars Gillberg ETX.ETXLAGI, Gun Jonsson ETXT.ETXUNAR.

Radio Systems Division, Ericsson Communications Ltd. Wellington, New Zealand.

DATA TRANSCRIPT ENGINEER

● We're looking for someone to work on data transcript issues. The process we follow in New Zealand is a bit different as it includes researching, writing, proofing, verifying, and loading into the network. You will work closely with the customer, spending at least 2 days a week with their data team.

You need an eye for detail, excellent computer skills, good interpersonal skills, an ability to work odd hours to achieve the end result, and above all you must be results and quality oriented.

This is an excellent opportunity for someone with data skills to take your skill level one step further into the customer network. It can also be quite demanding as you will be required to research various issues surrounding data that are being studied for the New Zealand network (e.g., international roaming).

Our customer's network is advanced, and to give you a feel for our environment, we work with our customer who operate a CMS88 DAMPS network.

The network consists of 1 iHLR, and 5 MSCs, 1 MXE for Messaging, and SMAS for Wireless IN. CDPD has recently been implemented and will go commercial shortly, and CMOS will be delivered this year.

I am most interested in a local employee, however I will consider a short termer to then train a local.

Contact: Jill P. van Nortwick immediately. memo ENZ.ENZJVN, email enzjvn@nzsf00.epa.ericsson.se, phone +64 25 716 700.

Ericsson Telecom nikasyon A.S., Istanbul

ENK COMPETENCE DEVELOPMENT CENTER

ENK is the local company of Ericsson in Turkey located in Istanbul and mainly responsible to support the biggest GSM operator in Turkey, TCELL which has also GSM networks in operation in other export markets. Due to market requirements ENK is now establishing a Competence development Center to train ENK and customers staff.

● We are looking for AXE Technical Training instructors with a wide range of expertise e.g. AXE-10/CME20 O&M, RBS 200/2000, O&M advanced courses.

You should have at least 2 years teaching experience in AXE-10/CME20 in a technical training center. Courses will be held in English.

Contact: Ali Ercan, Training Man.+90212 654 47 50, Memoid:ENKAOE or Defne Konuralp, HR Man. +90212 286 06 06, Memoid:ENKDEK

L.M. Ericsson A/S, Copenhagen, Denmark

TASK MANAGER TO THE AXE ACCOUNT

● The job: You will be responsible for defining and negotiating projects and smaler tasks towards our internal customer as regards time, cost and quality etc. You will initiate start up of projects in the organisation and also make the follow up on projects together with the projectorganisation. You will act as contact person towards Product Provisioning Area (PPA) both for Traffic Control (at LMD) and IN (at ETX in Karlstad).

Besides You will act as contact person for established projects/tasks within INS and different tasks for the Danish market. Together with Competence & Resource management You will make the resourceplanning, for planned and established projects, based on the competence and resource requirement foreseen by the PPA's. You will be responsible for the planning directive for the Danish market and OPS design. You will attent the AXE-10 account management team.

To qualify You should have/be: at least a Bachelor degree in Engineering or equivalent. 2-3 years experience within Ericsson (preferable as manager). Teamoriented and able to prioritize between own tasks. able to make the right decisions even during time pressure. Experience in financial follow up is a merit.

Contact: Account Manager Marianne Horstmann, phone +45 33 88 36 91. Application not later than 970207. Department of Human Ressources, Anne-Marie Jensen, Memoid: LM-DAMJ please mark the application "9733".

Ericsson Radio Systems AB, Kista

We are looking for a new colleague to the unit Ericsson Support Office GSM Far East. The Unit is responsible for the verification and second line support towards the Application Systems in service in the Far East (CHINA, HONGKONG, MACAU, MALAYSIA, SINGAPORE, THAILAND, VIETNAM AND LAOS). During February we will move to a new renovated office in Sundbyberg.

MARKET RESPONSIBLE - ESO, GSM

● You will be responsible for the co-ordination of all the ESO activities for one or some markets. This implies following:

You will be the interface (direct and telephone contact) towards: The Field Support Centre (FSC) at the related Local Company (LC). Market Operations (ERA/LN, ERA/LD). Customer Services (ERA/LY).

Maintaining contact with FSC by periodic visits to the related LC (2-4 times/year).

Project leader (within ESO) for updates and upgrades for the market. (CN-A's & ASR's).

Planning of future updates and upgrades for the market and be involved in improvements of methods and routines.

Technical assistance with support from the ESO help desk.

We expect you to have the following skills: Good general knowledge of the AXE system. Experience of project management and AS-handling/Customer Support. Familiar with the ASM (AS Modification) and ASR (AS Replacement) processes. Be able to work with minimum assistance according to service agreements, goals and objectives. Co-operative, responsible, methodical and flexible.

If you have working experience from a Local Company, preferably within the support area, it will be considered as an asset.

Contact: Anders Briandt, phone 08-757 5650 or Kristina Adebo, phone 08-757 2846. Application: Ericsson Radio Systems AB, LZ/HS Towa Raak, 164 80 STOCKHOLM

Ericsson Telecom AB, Public Networks, Customer Services Stockholm

GLOBAL RESPONSE CENTER PRODUCT & SERVICES MANAGER

● We are looking for a highly motivated, independant person with good Ericsson knowledge to join our team as our Stockholm manager. You will be one of 4 managers in the GRC team, and this role is located in Stockholm, the other three at our GRC hubs in Holland, USA and Australia.

You will meet this challenge with an open personality, a strong decisive mind and be comfortable in an environment where you are managed by objectives and relatively "self directing".

We need you to join us in managing our service portfolio, finance and many other activities associated with keeping the GRC running well. It is important that we have a presence in Stockholm to work with our other parties in delivering support to our customers.

Knowledge of Customer Service of any kind would be an advantage, but attitude is the most important.

Our customers are all over the world, and as such some foreign travel is a normal part of the work. If you are interested in making a difference, and wish to know more about this exiting job then contact :

Contact: D EALES ETMDES +31 161 229362, P DICKSSON EUSDCKN +1 972 583 1356, A LUIGA EPAADL +61 393 301 1814 eller C SUNDSTROM +46 8 719 7139.

Ericsson Radio Systems AB, Kista

AREA MANAGER – LATIN AMERICA

Around the world, wireless and PCS markets are growing rapidly. D-AMPS/AMPS systems today serve over 50% of the world's subscribers. Our mobile telephone system, CMS 8800, is the world's most sold system, all standards considered.

● We are now looking for an ambitious colleague as Area Manager for specific customer accounts in different parts of Latin America. We can offer an interesting position in an expanding business. You will be responsible along with our local company for fulfilling our high customer expectations in following areas:

Marketing and sales activities towards one or more customer accounts.

Consolidated sales and order intake from the accounts.

Establishment of a long-term partnership between our customer and Ericsson and to ensure excellent customer satisfaction.

This position will give you a wide understanding of our business development and company strategies.

Qualification and experience:

The applicant should have a university degree (M. Sc., MBA or similar).

Excellent English and Good Spanish and/or Portuguese.

At least 3 years working experience and ideally 2 years in telecommunication industry and international business.

Ability to build excellent relations and drive for results.

We will offer you a stimulating working environment in a small team with the potential for good personal development.

Contact: Annika Eriksson, +46 8 7571628 or Björn Berndtsson, +46 8 7572232. Application: Göte Hedblom AH, Ericsson Radio Systems AB. 164 80 STOCKHOLM.

Ericsson Ltd, Guildford

MOBILE INTELLIGENT NETWORKS

ERICSSON Guildford recently acquired overall responsibility for development of the SSF-AM, which is part of Ericssons Intelligent Network soluction which serves all Ericsson mobile aplications, CME20/CMS30/CMS40/CMS88.

A number of opportunities now exist to work with IN for mobile networks within this fast developing area. These positions would interest people with IN experience as well as highly motivated people who want to participate in the development of SSF-AM.

ABOUT GUILDFORD

Cellular Systems and Terminals Division is located in Guildford, Surrey. Guildford, the historic County town of Surrey, provide an excellent mix of ancient and modern attractions, including older style specialist shops and modern shopping centres. The town also boasts an art gallery, a museum and magnificent norman castlekeep, set in spectacular grounds.

Ericsson is the major private employer in Guildford, with around 800 employees at present.

The area also provides good schools, plenty of opportunities for various recreational activities nearby.

TECHNICAL SPECIALISTS

● The SSF design organisation in Guildford is expanding its existing systems group and therefore has opportunities for additional Technical Specialists. The recently acquired overall responsibility for SSF-AM within all mobile applications means that we will further expand our technical responsibilities in the areas of requirements capture, operational product management (OPM) and in working together with strategic product management (SPM).

Technical Specialists form a part of our systems group and are responsible for ensuring the technical integrity of the SSF-AM system for current and future development.

The Technical Specialist helps specify requirements for the future development of the system. The Technical Specialist also ensures the direction of future development by active participation or a leading role in technical boards which cross the Ericsson organisation. He/she provides expert advice and support to the Ericsson organisational as required.

Qualifications, Experience and knowledge: IN experience essential. Mobile telephony experience an advantage. Degree in computer science or related science or engineering field or previous relevant software experience. Experience in software design or systems design in line and/or project organisation.

Contact: Grethe Vaughan - Department Manager, Memold: etl.etlgrs, E-mail: grethe.vaughan...guildford.ericsson.se.

SENIOR SOFTWARE DESIGNERS & SOFTWARE DESIGNERS

● In Guildford, the existing SSF-AM design organisation needs highly motivated and qualified senior designers.

Technically the expansion consists of development and support responsibility for the whole of the SSF-AM, in mobile applications.

As a senior designer, you will be involved in all areas of work ranging from early IP phases all the way through implementation, function test in simulated environment and follow-up depending on individual interest and competence.

Apart from technically very challenging work in the IN area, this organisation is also about to embark on working with a new object oriented development methodology.

Qualifications, Experience and knowledge: Degree in computer science or related science or engineering field or previous relevant software experience. At least 3 years experience in AXE software design or systems design preferably in IN and mobile networks.

Contact: Grethe Vaughan - Department Manager, Memold: etl.etlgrs, E-mail: grethe.vaughan...guildford.ericsson.se.

SENIOR TESTERS and TESTERS

● In the area of function testing for SSF-AM a range of options will be available for people of the right calibre. General responsibility is FT preparation and execution on target as well as in SFT environment. All work is done in close cooperation with the SSF-AM design organisation

Main tasks: Preparation of FT TSs, TIs, definition of the pre-requisites for verification of the test object, FT execution, reporting of the resuesults of the test.

The senior test position will be responsible for: test analysis during feasibility study, work planning and team leading.

As as a suitable candidate you should have more than 2 years (4 for senior position) experience in Function test area, good knowledge of AXE and most Ericsson tools used during verification phase. You must also be able to work in teams. Experienced ESO or FCS support engineers may also be suitable for this position. Knowledge about AM based AXE structure, Intelligent networks, mobile networks are a clear advantage. If you have most or all of the above abilities and want to to be part of a dynamic team, please

Contact: Zoran Miletic - Function test and product support manager, Memold: etl.etlznmc, E-mail: zoran.miletic...guildford.ericsson.se.

PRODUCT SUPPORT

● General responsibility is to support SSF-AM products on the market. All work is done in close cooperation with SSF-AM design. Main tasks: Answering TRs, creating and testing corrections and working on CNIs.

As a suitable candidate you should have more than 2 years experience in the product support area, good knowledge of AXE, MHS and other Ericsson tools used for product support and testing. Experienced ESO or FCS support engineers may also be suitable for this position. Knowledge about AM based AXE structure, Intelligent networks, mobile networks are a clear advantage. If you have most or all of the above abilities and want to to be part of a our team, then please

Contact: Zoran Miletic - Function test and product support manager, Memold: etl.etlznmc, E-mail: zoran.miletic...guildford.ericsson.se.

TROUBLESHOOTERS

● General responsibility is solving problems during function test execution as well as during FOA activities. Main task: work together with testers on solving problems on a functional and system level.

As a suitable candidate you should have very good experience in troubleshooting, preferably within IN, together with sound knowledge of AXE and SFT environment. Experienced ESO or FCS support engineers may also be suitable for this position. Knowledge about AM based AXE structure, Intelligent networks, mobile networks would be an advantage. If you have most or all of the above abilities and want to be part of a our team, then please

Contact: Zoran Miletic - Function test and product support manager. Memold: etl.etlznmc, E-mail: zoran.miletic...guildford.ericsson.se.

"Take the next step, join us in Älvsjö and take part in the development of the GSM network."

Ericsson Radio Systems AB are looking for SW designers and testers.

The Product Unit "Digital Switching Systems and Applications", (DSA), provides competitive switching, service control and application products to GSM/DCS/PCS operators through Ericsson marketing and sales channels.

As the result of the continued success for Ericsson's GSM systems, the Business Unit for GSM, NMT and TACS (RMOG) has started a new Design Centre for development of AXE 10 products for Mobile Switching, Service Control and Satellite based Systems. The organisation is based in Älvsjö. In this new Design Centre there are open positions within the following areas:

Software Development

We are looking for AXE 10 designers with one to five years of experience from AXE 10 development.

You will be a member of a Design Team that will design, implement, and test new functions in our GSM system. You will either work with functions for transferring text messages (Short Message Services, SMS) or functions in the central network database (Home Location Register, HLR).

You will participate in the complete software development cycle from requirement specification and feasibility study through all development phases.

We are working in an international environment together with other Design Centres in Germany, Spain, and USA.

For further information please contact Hans Carlsson, phone INT +46 8 719 93 68 or Lars Marklund, phone INT +46 8 719 91 97.

Simulated Function Test (SFT)

You will be a member of a Testing Team. The main task will be to perform function test in a simulated environment.

All testing activities will be done in close cooperation with the Design Teams.

1–4 years experience of AXE 10 testing is required and previous experience from simulated test environment is a merit.

For further information please contact Claes Lillerskog, phone INT + 46 8 719 91 80.

For all positions it is essential that you are open-minded, flexible and enjoy working in a fast growing organisation. A good knowledge in English is a requirement. Previous experience within GSM is not required but considered valuable.

For all positions Human Resources contact is Christina Höglund, phone +46 8 404 78 41, memoid EXTR.QRACHOD.

Please send your application to:

Ericsson Radio Systems AB
LK/H Mia Hjertén
164 80 Stockholm

e-mail: erac.eramihj@memo.ericsson.se

Ericsson's 90,000 employees are active in more than 130 countries. Their combined expertise in fixed and mobile networks, mobile phones and infocom systems makes Ericsson the world-leading supplier in telecommunications. You can get more information about us on our homepage **www.ericsson.se/SE/**

ERICSSON

Super-Internet, broadband Internet, multimedia... the names still haven't registered. They all refer to new high-capacity connections that will soon reach all home computers via existing telecom or cable networks.
With its ANx family of systems, Ericsson has taken a leadership position in a vast, emerging market. One of the world's first contracts in broadband communications for private households was signed recently by Ericsson Telecom and Telia.

Broadband on a broad front

Illustration: TOM OLSSON

About 210 employees of Ericsson units in Stockholm, Vienna and Menlo Park in the U.S. have worked closely on the development of ANx. Per-Olof Sjöberg is responsible for the entire ANx family of systems, working from his office in Kungens Kurva, outside Stockholm.

"For the time being, we're still operating with a limited field of vision when it comes to the range of new opportunities created by broadband techniques," says Per-Olof Sjöberg. "In our capacity as a supplier of infrastructure, we also have an important responsibility to market the full range of new services."

Could become market leader

Johan Lindskog, ANx Marketing Manager for the broadband business unit, adds:

"We have to prove we can offer competitive, cost-efficient solutions now. Ericsson has to become a household name in this area; otherwise, we might run the risk of missing out altogether. A large number of markets have expressed interest in large-scale broadband operations, and it's imperative that we establish a strong market presence."

Telia's investment in Sweden is definitely on the cutting edge. The U.S. is another market forging the way in broadband techniques. Cox Communications, an American operator, is now planning a pilot project in Oklahoma City, where ANx solutions for cable-TV networks are creating the infrastructure required for a multi-service network to handle telephony, data, video and the local power company's energy supply system in the area.

Competition on all fronts

In addition, four American telecom operating giants are now building broadband facilities to serve private homes. Ericsson took part in the bidding process, but finished second to Alcatel, the declared winner. This is not a matter of concern for Per-Olof and Johan, however.

"Many suppliers are involved in this form of competition. Ericsson is well-positioned, and we have developed a competitive solution at just the right time. ANx has excellent potential to become the market leader," they say.

Current efforts are focused on marketing in parallel with continued technical development.

The market for broadband services is propelled to a very large extent by customer needs. Competition between different operators becomes more intense with every technical advancement.

"By investing in ANx, a telecom operator can compete with a cable-TV operator simply by offering pay-per-view video over the telecom network," explains Johan Lindskog.

Of course, there are investment costs involved in building a new infrastructure. But there are also a number of other driving forces that make market players willing to invest. Competition between different players is a fact of life and represents one major factor. The drive to be the first company to offer something new is another. Increased general knowledge and interest in cyberspace is another driving force. More and more people are willing to pay for access to new information media.

Advertising on new media

Furthermore, virtually all business enterprises will soon be able to advertise via the new information media, which will also create greater financing activity and investments. Broadband to private households opens the door for special advertising customized specifically for private consumers.

In addition to system solutions, ANx also features a subscriber element, or terminal, that has excellent prospects of becoming tomorrow's best-seller in the consumer market. Although broadband opportunities are still a novelty, and perhaps not as widely known among the masses, infrastructure expansion will soon change that very quickly.

Focused investments

Customers will buy a broadband terminal in the same way they now buy mobile telephones and modems. Ericsson's position in the market for mobile telephones will provide a strong vantage point for the launch of its new consumer products.

"We're working in cooperation with other suppliers to develop a standard interface between systems and terminals," says Per-Olof Sjöberg. "In the case of GSM, it took 10 years to establish a standard. Today, the tempo is faster. I think we will establish at least a de facto standard during the next year."

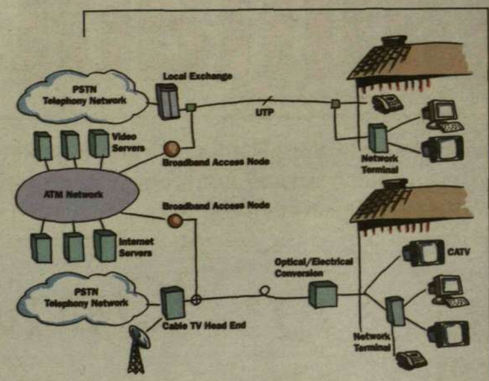
ANx will be a trump card in Ericsson's play for new customers. Special focus is now placed on establishing a foothold and establishing the Ericsson name as a broadband supplier.

"Our main responsibility is to provide Ericsson's local companies with all the support they need," says Johan Lindskog. "Our objective is to pursue five–six ANx projects for copper and cable, respectively."

Special efforts will be concentrated primarily in important key markets with volume potential, for example, the U.S., Spain, Italy, Singapore, Canada, New Zealand, the U.K., Argentina and Sweden.

KARI MALMSTRÖM

New high-capacity connections soon available for all PCs



ANx family already includes complete solutions

■ The ANx family already includes complete solutions for traditional, copper telephone networks and cable/coaxial networks. ANx is an "overlay" system that can be installed quickly in existing infrastructure, regardless of which company supplied the basic system.

The ANx system platform is uniform, while access solutions may vary. ANx has an ATM-based central unit that serves as the connecting link between the operator's data transmission network (the way out to the Internet, for example), the conventional telecom or cable-TV network and subscribers at home or in their offices.

ANx DSL provides broadband access via telecom networks. The ANx system platform is combined with the ADSL technique, which has been upgraded by Ericsson in Austria, and presented in the form of various solutions under the Cobra name (Copper Broadband Access). With the help of ADSL, telecom operators can transmit information 300 times faster than modem links on their totally conventional copper access networks. As a result, moving pictures can be transmitted with much better quality standards than VHS video.

The field is basically wide open for transmissions of all types of services. Internet surfers who wade through long reply times via modem, and especially long transmission times, can easily understand the difference.

The solution for coaxial networks is called ANx HFC, networks with such high transmission capacity that they enable subscribers to have channels of their own for transmissions of personal, tailor-made information. ANx also provides a bridge to public telecom networks to accommodate integration of conventional telephony.

Opening new playing fields

■ Multimedia communications will soon be reality. The Internet, as we know it today, has created greater demand and increased the supply of interactive services. Broadband technology is opening completely new playing fields.

Why should somebody else compose the contents of my newspaper? Who decides besides me when I want to see a movie, and which movie? When I call my best friend, of course we would also like to see each other, not just talk. Why shouldn't we ask each other if the kitchen chairs should be repainted by looking at them together?

When I visit my doctor, who might not know what sort of flu shots I had last autumn, why should I be referred to some specialist for another examination? If I happen to work at home on the day my boss conducts an important review, I also want to see the overheads and information written on the blackboard. No problem, if your operator invests in ANx!

KARI MALMSTRÖM

contact

Ericsson, HF/LME/I, Room 811023, S-126 25 Stockholm

What do a marketing manager and a project manager do on a business trip in western Africa? For Robert Rudin and Mats Ohlsson, a typical day consisted of customer contacts, paperwork in the hotel room and a reconnaissance trip to the Ashanti gold province.

On a hot GSM-assignment

It's barely 6:00 a.m. on a cold Saturday morning in January. There aren't many travellers at Stockholm's Arlanda airport as Robert Rudin and Mats Ohlsson make their way to the special check-in line with their baggage.

"We always carry a heavy load when we travel – loose-leaf binders, cellular phones and diverse equipment. This package contains a rectifyer which needs replacing," explains project manager Mats.

"Because we still don't have an office in Accra, we bring equipment and supplies with us so that we can work effectively from the hotel room," adds Robert, who is marketing manager for northern and western Africa.

Both work for the GSM, NMT and TACS business unit at Ericsson Radio Systems. This business trip is taking them to Ghana, where the operator Scancom has just started operations of its new Ericsson GSM system.

Phoning Sundbyberg from Labadi Beach. Robert Rudin (left) and Mats Ohlsson made many calls to their department back in Sundbyberg.

Radio coverage at the airport

On Monday morning Sam, the driver, picks them up at the hotel. He drives them in a white Ericsson pick-up van along bumpy roads to Scancom's office. Robert and Mats discuss radio coverage with Mustapha Houri, technical manager at Scancom. They look at maps and review radio coverage at the airport. Better coverage is needed and they agree to establish a base station near the airport.

Mats and Robert walk up to the blinding sunlight and hot air on roof of the building. Red dust swirls around the cars on the ground below. The roof contains the switch and a base station. All equipment is placed in a Swesite. On the adjacent mast, there are antennas and a Minilink.

Spacefon

Back at Scancom's office, they have a meeting with President Ghassan Oueida. They plan for phase two in Kumasi, Ghana's second-largest city in the Ashanti province, where an important gold mine is located.

During discussions concerning Ericsson's cellular phones, Ghassan Oueida expresses his astonishment that Scancom can't buy telephones directly from Ericsson Mobile Communications.

Gregory Mansour, marketing manager at Scancom, describes the marketing activities planned for the launch of the GSM system, which has been named Spacefon.

On the way back to the hotel, they stop in at the market for African handicrafts. Mats is interested in an African guitar, called a kurra. He ends up buying two!

To Kumasi

Early the next morning, Mats and Robert fly to Kumasi. It's a 40-minute flight with a fan in every seat pocket, since the plane has no air-conditioning!

Together with a representative from Scancom, they visit the locations where the sites will be placed. It ends up being a unique sightseeing tour along bumpy roads in a typical African city, green with abundant foliage. Before flying back to Accra, Mats and Robert have a look at some of the larger hotels. It's important to find decent lodging for the Ericsson personnel who will soon arrive to install phase two.

GUNILLA TAMM

Exhibitions in which Ericsson is participating until August

■ **Ericsson is taking part in a great many exhibitions in the course of the year. This is an up-to-date summary:**

WIRELESS TECHNICS Mexico City/Mexico 1997,11–14 February, TIM, José Luis Marin

NORWECOM St. Petersburg/Russia 1997, 18–22 February, LME/I, Christer Fall

MECOM Manama Bahrain 1997, 22–25, February LME/I, Lars Bernring

INTERCOM 97 Vancouver/Canada 1997, 24–27 February, EMC/M, Art McCabe

WIRELESS 97 San Francisco/USA 1997, 3–5 March, EUS/R, Dyanne Koithan

CEBIT 1997 Hannover/Germany 1997, 13–19 March, EDD, Joachim Fliehs

SIRE 97 Sarajevo/Bosnia Hercegovina 1997, 2–5 April, LME/I, Marianne Löfkvist

GSM CHINA Beijing/China 1997, 8–10 April ERA, Britta Ahlberg

NETEC 97 Helsinki/Finland 1997, 23–24 April LMF, Christina Helander

COMMUNICATIONS TECHN. INDONESIA 97 Jakarta/Indonesia 1997, 23–26 April LME/I, Christer Fall

NEOCOM Kiew/Ukraine 1997, 23-25 April LME/I, Lars Bernring

MIDCOM Abu Dhabi/Saudi Arabia 1997, 29 April–1 May, LME/I, Christer Fall

EXPOCOMM WIRELESS Seoul/Korea 1997, 15-18 May, LME/I, Christer Fall

SVIAZ EXPOCOMM Moscow/Russia 1997, 19-23 May, LME/I, Marianne Löfkvist

INFORMATEX Manila/Philippines 1997, 20-23 May, LME/I, Christer Fall

WIRELESS WORLD 97 Atlanta/USA 1997, 2–5 June, EUS/R, Dyanne Koithan

CANADIAN WIRELESS TELECOM ASSOC. Montreal/Canada 1997, 3-5 June EMC/M, Art McCabe

KITTEL 97 Almaty/Kazakhstan 1997, 3–6 June LME/I, Marianne Löfkvist

ASIA TELECOM Singapore/Singapore 1997, 9–14 June LME/I, Lars Bernring

VOLGACOM 97 Novgorod Russia 1997, 16–20 June LME/I, Christer Fall

TELECOM CONF Warsaw/Poland 1997, 23-25 June RSA, Britt-Marie Hagman

THAI TELECOM 97 Bangkok/Thailand, 1997, early August ECT/ID, Porhnphan S.

■ We aim to make this list as complete as possible. If you have any questions or additional information about exhibitions in which Ericsson is participating, please contact Elsie Henriksson at Ericsson Events, memoid: LME:LMEELSIE, fax +46-8-7444282

Ericsson Events is part of the Ericsson Communications support unit, which is responsible for planning and implementing exhibitions and other events all over the world.

end line

Hardly a mountain-top without GSM

There is a hint of spring in the wind blowing through Stockholm these days. What a fantastic country we have - what a wonderful climate. One day snow and bitter cold, the next day soothing warmth and the promise of summer. I am convinced it must be the shifting weather conditions, with large temperature variations during the year, at times ranging from the sublime to the ridiculous, that gives us Swedes the strength and patience to cope with the most difficult situations in our everyday lives. Like when computers refuse to function, as I mentioned in my last column.

And while I'm on that subject, I should make a minor correction in my description of our problems with computer support at the Parent Company, as mentioned in the preceding edition of Contact. I have been informed that the real estate company, which is responsible for the physical computer network at the Parent Company, is innocent and herewith absolved of all guilt. During recent months, very significant upgrades have been made in the physical network and, hopefully, our problems in the future will be restricted to things that are connected to the network and its support. Small consolation in view of the strange error messages displayed by the computer and calls to the technical support number that are answered by a dial tone.

But let's get back to the weather. I had the great pleasure to take a winter sports vacation last week. One whole week of skiing in snow nearly a meter deep and brisk winter weather, a few rays of sun and cold mountain winds. It was years since I had the chance to spend a vacation in the austere luxury of a Swedish winter. The last time was in 1989 bmt and this year was 1997 amt. The cryptic codes mean "before mobile telephony" and "after mobile telephony."

Once again, I experienced how my life has been revolutionized by the 200-gram electronic device equipped with batteries and stored in the pocket of my ski jacket, and how it maintained continuous contact with the world outside my winter wonderland resort. I asked myself, how did we ever have the nerve to venture out into the wilderness in the old days without this lifeline called mobile telephony? How could people just "get away from it all" if their offices could not call at will during their vacations? Life in the Swedish Alps will never be the same. There is hardly a mountaintop left without GSM coverage. Thank you Telia and thank you Ericsson.

LARS-GÖRAN HEDIN