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ERICSSON  PUBLICATION FOR EMPLOYEES WORLDWIDE

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Japan has the world's fastest growth rate of mobile telephone systems.

Photo: GREAT SHOTS

A brutal market for mobile telephony

Entering the Japanese market can be very formidable for European companies. Despite the odds, Ericsson has succeeded in becoming one of the leading suppliers of mobile telephone systems in Japan. Now more of the company's products will be launched in this exciting Asian market. **Pages 12-14**

30 years' work with computers

Mike Williams has worked as a computer programmer for 30 years. When he entered the profession, Bill Gates was barely 11 years old!

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New view of software design

Ericsson and its software designers need to view each other differently. This became apparent at a seminar in the U.K. in June.

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Mobile phones everyday objects

Mobile phones are no longer the status symbols they once were. You see them everywhere you go. But a mobile phone holder for bikes? Watch for the new accessories.

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Dect system in a flash

It took only three months to get the DRA 1900 system up and running in Vad and Medyan, two Russian cities in the Nizhni-Novogrod region.

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Mammoth task for new millennium

The advent of the year 2000 will not cause Ericsson's computer system to crash.

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VACANCIES AT ERICSSON PAGES 20-23

industry news

Telia transferred to other ministry

■ Effective September 1, the management of Telia's shares has been transferred from the Ministry of Transport and Communications to the Ministry of Industry and Trade.



"The transfer of Telia to the Ministry of Industry and Trade is a significant milestone both for Telia as an operating company and for the Swedish telecom market," commented Industry and Trade minister Anders Sundström and Transport and Communications minister Ines Uusman in a joint commentary.

"Telia's capacity as a successful operating company will be improved, while at the same time the Ministry of Transport and Communications can continue pursuing a credible telecommunications policy."

Many people had expected that a change such as this would also be seen as an opportunity to begin preparing for privatization of the company, but this is not on the cards for the time being.

"I am strongly against selling off successful state-owned companies. Telia is a good company and generates substantial revenues for the state," prime minister Göran Persson was reported in the magazine Dagens IT as saying to Bengt Westerberg, chairman of Telia's Board of Directors.

However, Telia's articles of association will be changed to adapt them to the company's need to expand its international activities.

Spanish telecom license delayed

■ Spain does not plan to make a decision regarding the country's third basic telephony license until after the summer of 1998. This will precede total deregulation of the Spanish telecommunications market by only a few months. The operator that secures the third license will be competing with Telefonica and Retevisión.

Iridium takes shape

■ Another five satellites serving Iridium's global mobile telephony network have been placed in orbit. The rocket carrying the satellites was the fourth to be launched from Vandenberg Air Force Base in California.

Twenty-two Iridium satellites are already orbiting the earth, enabling telephone contact to be made in a

matter of seconds from anywhere in the world. The total number of satellites deployed will shortly rise to 66.

According to a statement from Iridium, all technical aspects have so far functioned according to plan. Work still remains to be done regarding financing of the project.

The global launch of the entire project is planned for September 1998. Global wireless telephone communication will then be possible with a single telephone, a single number and a single bill. No information was available about the potential size of the bill.

Thyssen sells mobile telephony interest

■ Thyssen Telecom, one of the new telecom operators in Germany challenging the giant Deutsche Telekom, recently sold its 30-percent interest in the E-Plus mobile telephone network. The purchasers, who paid DEM 2.26 billion, were the two competing companies RWE and Veba.

Dieter Vogel, president of Thyssen Telecom, said in an interview in Der Spiegel that the reason for the sale was the excessively slow pace of deregulation in the German telecoms market. The company has nonetheless earned about DEM 1 billion from its involvement in the E-Plus network – and this without investing any capital.

Now Thyssen Telecom plans to focus intensively on its remaining telecommunications operations, for which the company does not require any infrastructural facilities of its own, such as mobile telephone networks. The main focus is on profitable telecommunications services, as well as multimedia, Internet and satellite communications.

Career advice on the Internet

■ This autumn, the Swedish Industrial Salaried Employees' Association (SIF), together with the Online Career Center (OCC), is starting a forum to provide career advice and job-seeking help on the Internet.

The aim is for visitors to the site to be able to receive individual help via their computers with such tasks as checking through an employment agreement, finding statistics on wages and salaries, reading job applications or finding information about a company that has advertised a vacancy.

The database is open to all, while career counseling and other related services are available only to SIF members.

New corporate function at Ericsson

■ Effective October 13 this year, a new IS/IT function will be set up within the parent company. The purpose of the new function is to implement Ericsson's corporate policies and strategies in this area.

Rolf Skoglund has been appointed to head the new function. He joins Ericsson from Microsoft, where he was working with interactive media.



The Turkish customer is modernizing its networks in the cities of Istanbul, Ankara and Izmir. Photo: GREAT SHOTS

Success for transport networks in Turkey

Ericsson has signed a contract to supply SDH transport network equipment to Turkey's dominant telecom operator.

Türk Telekomunikasyon A.S. has now selected a system and chosen Ericsson as its main partner in the transport network area.

The contract, which is worth SEK 130

million, covers the delivery of total SDH solutions, including crossconnects and operational support systems.

The Turkish customer is currently modernizing its networks in the cities of Istanbul, Ankara and Izmir. The aim is to be able to offer the market voice telephony, data communication and multimedia services at transmission speeds up to 2.5 Gb/sec.

Ericsson
REVIEW

The telecommunications technology journal

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8,000 MiniLinks have been ordered by the German mobile telephone operator Viag Intercom.

8,000 new MiniLinks for Germany

Ericsson is now the world leader in the area of microwave links. Ericsson's dominant position was further reinforced by a major order – for 8,000 MiniLinks – from the German mobile telephone operator Viag Intercom.

Viag Intercom has selected Ericsson Microwave Systems and Bosch Telecom as the suppliers of all the

microwave transmission equipment for the first phase of the new mobile telephone network. The network will comprise 10,000 base stations, which will be interconnected via microwave links. When the network is completed in 2001, it is expected to be the world's largest GSM 1800 system.

Ericsson and Bosch have been cooperating in the microwave technology area for more than five years.

Bosch is one of the world's largest suppliers of microwave equipment, while Ericsson is the world's largest producer of short-range microwave links. The combined strength of the two companies ensured their success in securing this important order.

The order will increase the pressure on Ericsson's Borås plant, which has already managed to double its production every year, over the past few years.

Ericsson acquires U.S. Internet company

Ericsson is to become joint owner of Juniper Networks, one of the most dynamic Internet companies in the U.S. The deal is the first stage in Ericsson's expansion in the area of data communications.

"Juniper will provide the know-how we currently lack at Ericsson," comments

Gunnar Wranne, who is responsible for Internet products in the Data Networks and IP-based services business unit within Infocom Systems.

Anders Igel, head of Infocom Systems, has for some time favored purchasing or setting up partnerships with several smaller, cutting-edge companies in order to establish a fertile environment for the continued growth of the operation. Juniper Networks was among the companies on the list. However, Ericsson is not the sole beneficiary of the deal but is sharing it with six other companies, includ-

ing several of its main competitors: 3Com, Lucent, Siemens, Newbridge Networks, Nortel and Worldcom/UUNet Technologies. The companies have invested a combined total of USD 40 million. Gunnar Wranne is unconcerned about Ericsson being one of several investors.

"We plan to utilize Juniper's know-how more cleverly than our co-in-

vestors – for example through our cooperation with Ericsson Cyberlab in Menlo Park, California."

Juniper Networks is described as an exciting newcomer among the successful Internet companies in the U.S. market.

The company was founded by top engineers from Sun Microsystems, MCI

Communications and Cisco. They have developed a product range that commands considerable respect throughout the industry, particularly since it now has the financial backing of some of the world's largest telecommunications

and data communications companies.

Among other products, Juniper is developing a "Gigabit router," a high-speed data exchange for Internet traffic. The exchange could be described as a machine that transports IP packages – on which the Internet is based – though the network at very high speeds. By installing this device, the operators overcome the traffic jams resulting from subscribers surfing the Internet. Within Ericsson, there has long been discussion about the importance of being able to offer the market a product of this type.

The Data Networks and IP-based services business unit recently moved part of its operations from the head office in Stockholm to California.

"From here we plan to operate the cooperation," says Gunnar Wranne. "We are still looking for a person to assume responsibility for network management."

The deal with Juniper is Ericsson's first external investment in the datacoms area, but Gunnar Wranne does not rule out the possibility that there will be more deals of this type in future.

LENA WIDEGREN

hello there!



"Obviously it is a challenge to become president of an 'entire' company encompassing development, design, marketing and production, says Bernt Högberg, new president at Ericsson Radio Access.

What are you bringing with you from Canada?

Slightly less than a month ago, Ericsson Radio Access acquired a new president. His name is Bernt Högberg and he joins ERA after being president of Ericsson Communications in Canada.

How does it feel to return to Sweden?

"It feels very good, thank you. After being with Ericsson in Toronto for six years, it is exciting and challenging to be given responsibility for Ericsson Radio Access and have the chance to return to Sweden. Naturally there were also a number of practical problems with moving house from Mississauga, some 30 kilometers from Toronto, to Nynäshamn south of Stockholm, where we still own a house."

Does it seem a big step to move from an Ericsson company in Canada to Ericsson Radio Access, which is a very Swedish company by comparison?

"Obviously it is a challenge to become president of an 'entire' company encompassing development, design, marketing and production. And I have already observed that Ericsson Radio Access feels very Swedish in the sense that the company is physically located entirely in Sweden and that most of the documentation is in Swedish."

Have you been with Ericsson for a long time?

"In 1987 I joined Ericsson Radio Systems in Kista, where I was marketing manager for what we then called 'management systems within defense operations.' The division was sold to Philips two years later. My next assignment for Ericsson Radio Systems was to coordinate and develop Ericsson's activities in the GSM market in the UK. Then I worked in Australia for a spell. When my family and I moved to Canada in 1991, it was a great adventure for all of us."

What experience will you take with you from Canada?

"Since this is a sales organization, I hope I can contribute my experience of working close to the customers and end users."

What do you do when you are not working?

"We plan to dust off the sailboat now that we are returning to Nynäshamn. My family and I love sailing. Skiing is another of our favorite pastimes that we were also able to enjoy in Canada."

KARIN HULTMAN RONANDER

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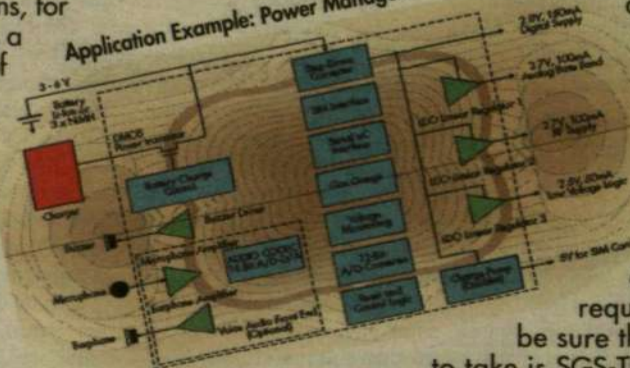
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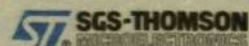
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portrait

Barely thirty years ago, Mike Williams was a student at Cambridge. That is when he began doing computer programming – in Fortran. Twenty years later, Mike was one of the programmers behind Ericsson's programming language Erlang. Mike was also one of the first at Ericsson to get an e-mail address. Not many at Ericsson people can beat his record of 20 years with e-mail via the Internet.

When Mike started his career Bill Gates was 11 years old

Where computers and computer programming are concerned, few people at Ericsson are more knowledgeable or more experienced than Mike Williams.

Despite his 27 years in Sweden, it is not hard to hear that Mike Williams comes from the UK. He speaks with enthusiasm, hopping nimbly between decades and scribbling vehemently on the blackboard as he relates the story of his history at Ericsson. It's a long story. He jokes that if you look closely, you can see an Ericsson inventory number on the back of his neck.

"The reason I've been here so long is because I've been able to hop around a bit and do different things," Mike says, almost apologetically, about his 27 years at Ericsson.

Genuine interest

Cambridge in the late 1960s did not offer courses in programming.

"Those of us who got into computers at an early stage were driven by a genuine interest," Mike says.

It was an interest not shared by many at the time. When Mike started programming, there were still ten years to go before the first computer that could reasonably be called a personal computer started being manufactured. Bill Gates was then eleven years old.

At Ericsson, computerized systems starting turning up at the end of the 1960s in connection with a precursor to the AXE system, called AKE.

"The first real programming assignment I had was to create an invoicing system for an ARE 11 station. That was mid-1970s. I have been programming, in one form or another, since that time," says Mike.

He is careful to call it "programming." There are those who talk about "software development" or "software design." Mike says it is all one and the same thing.

"It's all a matter of programming. Programming is what everyone's doing," he says.

The reason why the terminology varies is that there was a time when being a programmer didn't carry any status. During that time, someone else would be the one to produce ideas and do the thinking, while the programmer did all the drudgery.

"It's not like that any more."

Rapid development

Today, Mike Williams is unit manager of OTP, Open Telecom Platform – a platform for software development in telecom applications. It is based on the Erlang programming language, but is open to other languages.

Mike has seen development rocket ahead. Fifteen years ago, when he and a handful of colleagues began using Ericsson's first UNIX computer, few people realized that the time would come when people can hardly function without computers, and almost everyone has one on his or her desk.

"I remember the first computers. They were housed in special computer rooms with special air-conditioning.



Mike Williams has worked with computers for 30 years – longer than most. He is critical of Ericsson's approach toward programmers, but sees an improvement taking place. Photo: PATRIK LINDÉN

Today, there's a computer on every desk," Mike says.

"Nor, at that time, did anyone know what the Internet was. It was called the Usenet," Mike recalls. Mike has always operated in the areas where production and R&D meet. He prefers to call the area "development;" "research" connotes men in white coats doing work far removed from Ericsson's products.

Criticizes "programming factories"

He is not completely uncritical of the ways Ericsson has handled software and programmers.

"At one point the prevailing attitude at Ericsson was that anyone can write programs, and the thing was to

create massive "programming factories." Now, finally, people are starting to think differently," says Mike.

Programming, as Mike sees it, is mentally highly demanding work. Monkeys cannot be taught to write programs. You have got to have talent.

"It's better to have a few skillful people than an army of mediocrity. There's an enormous difference in productivity between good and bad programmers. Only now has Ericsson begun to realize how important it is to have good programmers. It'll take a long time before the entire organization learns it. And, a long time is something we don't have."

PATRIK LINDÉN

Ericsson's attitude toward its senior software designers, and software designers' attitude toward Ericsson, must change – if

Ericsson is to reach the goals established by the 2005 program. This realization was the reason why Ericsson personnel from various design centers gathered in Brighton for a first seminar on the future role of software designers.

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etween ten and fifteen thousand Ericsson employees are involved in software design, but there is no professional network for them, nor any clearly defined role or career path. In companies in the computer industry, designers are seen as heroes and they are well-known within the company. As Ericsson moves toward an integrated telecom-and-computer industry, it will have to encourage the development of a different attitude among and toward its designers.

To be blunt: traditionally, Ericsson software designers and developers tend to have the least visibility both internally and externally within our business. They remain secluded back at their design center. Absorbed in their own particular projects, they write code, without perhaps, having ever met the customer or the enduser.

The role can also be unrequited, as feedback more often than not arrives in the form of trouble reports, which offer little or no positive reinforcement to actual achievements.

Due to the apparent lack of career structure in this area, it is not uncommon to find that competent programmers actually move on as they seek promotion to other posts in the line management, product- and project management and systems management. This trend is less prevalent with our competitors in the computer industry.

"We want to create the opportunity to make a career without having to give up programming. Our employees must be allowed to take more responsibility and become more involved in the commercial side of projects,



Michael McNulty, designed the first development program for senior software designers.

Between ten and fifteen thousand Ericsson employees are involved in software design, but there is no professional network for them,

Illustration: MAGNUS BARD

without necessarily becoming full-time managers. What we need is more management, not more managers."

The words are Michael McNulty's. He designed the first development program for senior software designers at Ericsson – an initial phase in a competence-enhancing program within the framework of Ericsson's initiatives in quality development of software products and increased timing precision (ESSI, Ericsson System Software Initiative).

Competition

"As the telecom industry moves increasingly closer to the computer industry we will meet competition from companies that operate in a completely different way than we have so far – considerably faster and more efficient. That is why it is useful to compare Ericsson with a wholly software-oriented company such as Microsoft," says Anders Wåsterlid, who heads, from the parent company, Ericsson's software quality development work.

"In such solidly software-oriented companies, it is possible to make a career as a designer. Everyone knows who the best people are. They acquire a kind of hero status and act as role models – without giving up writing software codes. In a few years, we will need more such

well-known software designers at Ericsson. How many Ericsson people can name an outstanding software designer?" asks Anders Wåsterlid rhetorically.

A growing number of Ericsson products consist of or are extremely dependent on software. The "Ericsson 2005" program shows that the Company must develop a more tightly defined software culture, and that open systems, i.e. open telecom platform (OTP) and network management (TMOS) must lead the way. Even so, there has never been a clear-cut career path for this growing category.

"It turns out that fewer than 40 percent of all personnel involved in the designing of software products devote any great amount of time to writing software codes. That's something we'll have to change," says Anders Wåsterlid.

The question arose in connection with a preliminary study of the role of senior designers at Ericsson. It turned out that there are wide variations in competence throughout the company, and that there was no network for these people in which they might share ideas and best practices and develop as a professional body within the Ericsson group.

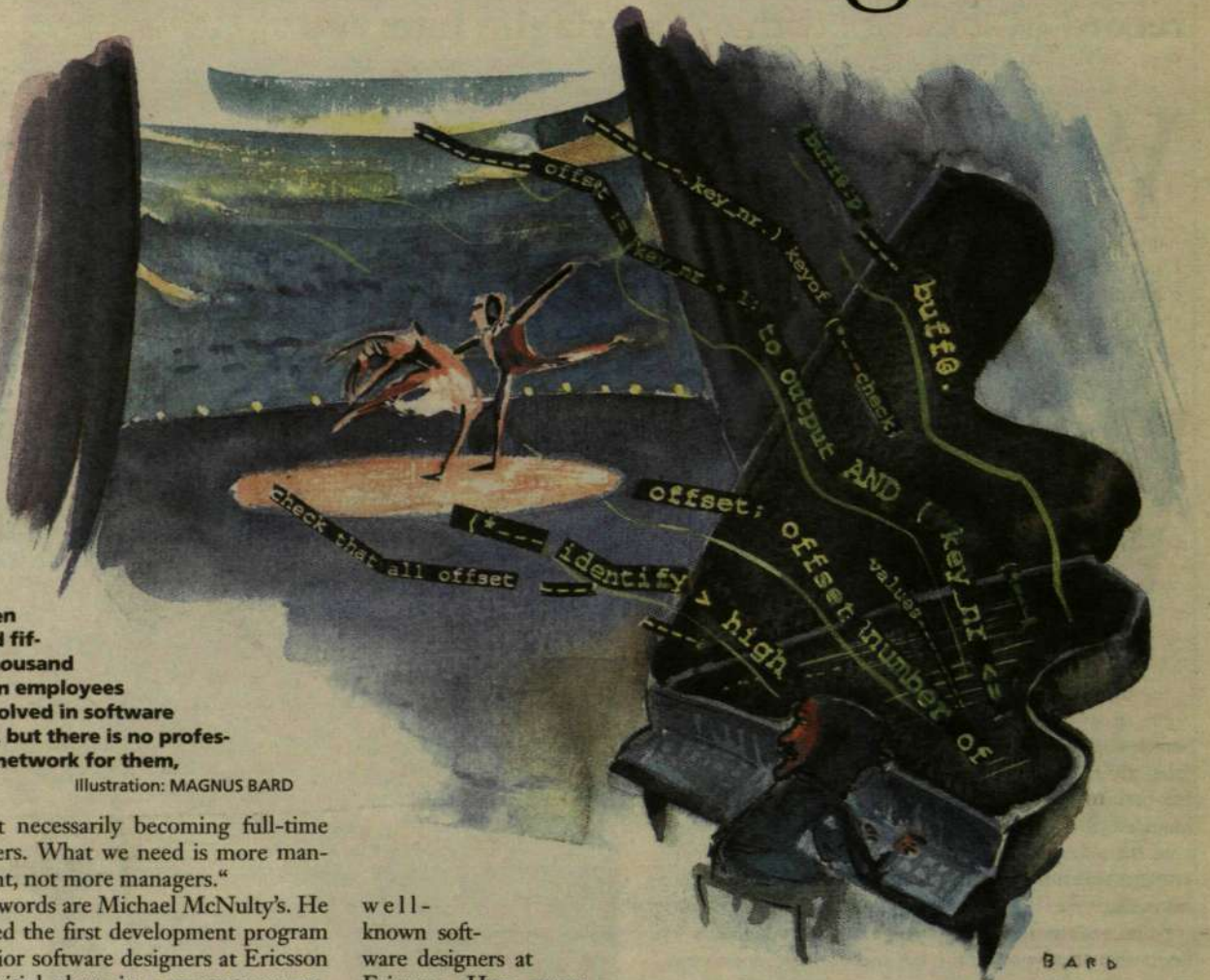
"I hope that we will be able to establish an annual seminar for senior designers to foster a more comprehensive approach. As software becomes increasingly important for Ericsson, employees who are involved with it must also take more responsibility and develop a broader perspective on the company's operations, start meeting the customer and become more aware of the end-user. Many employees have never had that opportunity," says Michael.

Meeting face to face

Being able to meet colleagues from the rest of the Ericsson world was much appreciated by almost forty people from all over the world who participated in the first gathering. Meeting each other face to face makes it easier to understand how vast Ericsson actually is, and how multicultural our design community is that colleagues' problems in other sections of the Company are not that much different. It is not unusual that the problems boil down to lack of understanding on the part of management.

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Analog telephones still in fashion

It's here, the new Dialog 3100 from Ericsson! But, you may ask, is a wired, analog telephone really "news" in the overheated IT market of 1997? You bet it is! More than 50,000 telephones have already been sold in 17 countries.

Dialog 3105, the basic telephone, was launched in April, followed recently by Dialog 3145, which features a speed calling and programmable functions. And this winter, Ericsson plans to introduce display and loudspeaker models.

"According to present estimates, we expect to sell nearly one million Dialog telephones between now and the year 2000, and make a good profit," says Juri Vajdaffy, product marketing manager for user terminals at the Enterprise Networks, unit of Infocom Systems in Nacka Strand. Juri Vajdaffy has been a major force behind the Dialog 3100 series.

Missing in product range

Despite their relative simplicity, the new telephones have met strong demand seldom seen in the marketplace. Local companies are lining up, anxiously awaiting the autumn launch of new variations designed to meet specific customer demands.

Ericsson discontinued its own production of analog, wired telephones a few years ago. At the time, they were considered obsolete in the constantly growing digital market of the future. But, it appears, the company was little too hasty.

The MD110 is a market success, both as a business exchange and a cornerstone in complex solutions sold under the Consono trademark. More than half of the world's MD lines are still analog, however.

Difficult problem

The situation has proved to be a difficult problem for Ericsson's sales force. Without its own telephones, Ericsson marketing personnel have been forced to find locally manufactured units that maintain acceptable quality standards, or buy terminals from competing companies. At the same time, local companies and customers have looked with envy at Ericsson's digital system telephones in the Dialog 3000 series.

"Our digital series is extremely popular," continues Mr. Vajdaffy. "Even esthetically conscious buyers in France have shown keen interest and appreciation. It's exactly what our customers want."

The new Dialog models were devel-



Juri Vajdaffy is project manager in charge of Ericsson's new analog telephones, which have achieved rapid success in the marketplace.

Photo: PETER GUNNARS

oped by Ericsson in cooperation with Telia, the Swedish telecom operator.

The telephones are produced in Malaysia by one of Telia's suppliers. Ericsson and Telia are now studying the feasibility of contracting the Malaysian manufacturer's plant in Shanghai for the Chinese market, where local production is virtually a basic requirement for success.

In Sweden, Dialog 3000 will carry Telia's logotype, but the telephones will be marketed under the Ericsson name in all other parts of the world. The first major installation was completed early in 1997 at the European Parliament. Ericsson is building a communications network to link all units in Strasbourg, Luxembourg and Brussels.

In the corridors and stairways of

European Parliament buildings, the Ericsson name is displayed prominently on analog telephones used in the contract installation that connects several telephones to the same line.

Juri Vajdaffy maintains close relations with his contact persons at local companies. He works tirelessly as head of user terminals, establishing and nurturing personal contacts in parallel with frequent visits to a large number of Ericsson companies. In his opinion, the market for a good analog telephone will remain strong for at least 10 more years – and probably longer.

"The world is filled with wires," he says, "Ericsson has installed analog lines for 120 years, and they will continue to be used for a long time."

KARI MALMSTRÖM

Excellent trademark exposure

■ The digitization of telephony has still not reached large-scale proportions in many markets of South America and Asia. As a result, sales of digital telephones are limited. The same is true in several regions of Southern Europe. Telephone exchanges in many hotels are still analog systems. Accordingly, phones in hotel rooms displaying the Ericsson name offer excellent trademark exposure.

The very phenomenon of trademark exposure combined with a declaration of Ericsson's presence as a supplier of infrastructure, might well offer the greatest gains from having analog telephones in our product range again, Juri Vajdaffy says.

Ericsson's awareness of trademark management and branding has increased enormously during recent years. Its new series of analog telephones provides an excellent opportunity to become even more visible in the company's brand strategy.

"The new telephones were developed primarily to support sales of MD110, but many local companies have already contacted large distributors in their respective countries in concerted efforts to sell the phones to the general public," continues Juri Vajdaffy. Local companies are anxious to spread general awareness of Ericsson's logotype and brand name in their markets. There is a distinct difference in awareness compared with just a few years ago.

KM

"The Young & the Restless" turns Dialog model to television celebrity

■ In an otherwise difficult market to penetrate, doors to the American market for Ericsson's new analog telephone model, Dialog 3100, may be thrown wide open by "The Young and the Restless," a TV soap opera with a national TV audience estimated at 10 million viewers. The Dialog 3100 will soon be used for all phone calls in the program.

"I sent a small brochure, a representative of Ericsson in the U.S. met the producer, and we reached an agreement," says Juri Vajdaffy, product marketing manager for user terminals at the Enterprise Networks unit of Infocom Systems in Nacka Strand.

Information Technology (IT) is now the rage even in the darkest regions of the Småland province in southern Sweden. The municipality of Vetlanda recently inaugurated its own highly sophisticated Citynet, an integrated data and telecommunications network.

InterNordica, a new telecom operator and main contractor, offers a variety of equipment that

Ericsson delivers municipal network to Vetlanda

includes a sophisticated MD110 network from Ericsson, which also supplied the actual system solution.

"We were looking for functions, not products," says Lars Bergmo, IT manager for the municipality of Vetlanda. "The fact that we own the network and do not have to lease from an operator provides several advantages."

In record time, spanning less

than nine months, Ericsson and InterNordica worked in close cooperation to complete all preparations, which included a fiberoptic ATM network that operates at transmission speeds up to 155 Mb/sec, as well as 400 computers for administrative purposes, 800 more installed in schools and about 600 telephone connections. The hub of all operations is housed in the Vetlanda

City Hall, connecting more than 20 locations throughout the municipality. All schools and other public offices in the city have been linked together in one network.

The work was started in October 1996, when virtually all of Vetlanda was dug up to accommodate the installation of fiber optic cables.

"Those days were filled with anxiety as winter approached,"

says Rolf Klasén, a member of the Dedicated Networks sales staff of Ericsson. "If the frost had penetrated ground level, we would have experienced serious problems, but our time plan worked perfectly."

Rolf Klasén and Göran Olsson, another staff member of Dedicated Networks, were responsible for the entire project, including the network solution contract from InterNordica.

THORD ANDERSSON

A new computer millennium

On New Year's Eve in less than two and a half years, as many of us ring in the new millennium with champagne and fireworks, many computers and programs will be celebrating the changeover in their own way. Many computers and computer programs are simply not prepared for the fact that the year 1999 will give way to the year 2000.

No one knows today exactly what will happen. The only things we know for sure are that there will be problems, that we've got to act fast and that the problems will be expensive.

**Hickory, dickory, dock.
The millennium
stopped the clock.
The clock struck one,
the computers went down
— hickory, dickory dock**

To look at the situation from a positive angle, it is likely that after the year 2000, Ericsson and many other companies and institutions will have considerably fewer and much better systems than they have today. A quality-enhancing purge will take place. Many older, awkward and poorly documented systems will be buried rather than adapted.

Huge computer virus

"The whole problem of our computers and the year 2000 can be seen as one huge computer virus we ourselves have created," says Christer Ekengren, parent company-based coordinator of all work relating to the problem for all of Ericsson's support systems.

The year 2000 will create chaos in computers and programs. Roughly speaking, the problems can be grouped in three different levels: 1) Time indicators that show year with two characters for use in calculations. For example, that the difference between the years 2005 and 1997 would be -92 instead of 8. 2) Several programs use logical operations with "more-than" and "less-than" functions, which will also cause problems when the programs refer to year digits. 3) On the hardware level, there are several types of PCs with a motherboard — for example — that is programmed with the prefix "19." In such cases, there is not much else that can be done apart from buying a new computer.



Christer Ekengren has been appointed to coordinate the work of adapting Ericsson's support systems to the year-2000 problem, on a company-wide level.

Photo: PATRIK LINDÉN



On New Year's Eve 1999, great numbers of computers and software will start behaving strangely. There is an enormous job to do from now until the turn of the century in getting all the systems and products in order.

Photo: GREAT SHOTS

While the task of finding a solution to the problems may seem hopeless, Christer Ekengren has not given up. "Actually, it's not that difficult," he says. "The big hurdle is time. It takes time to find the location of the time indicator in a program. We have less than 20,000 hours in which to do it."

No surprise

One might wonder how such a state of affairs could arise. The fact that the year 2000 would eventually come should not have been a surprise for programmers, even in the 1970s.

"Of course it's debatable, but I don't think it's difficult to understand that people in the 1970s and early 1980s ignored the problem," says Christer Ekengren.

Memory was simply very expensive. It was economically defensible to save space by indicating year with only two digits.

"During the late 1980s and now in the 1990s, computer memory has been relatively inexpensive and people tend to continue doing things the way they always have. No doubt that as late as the 1980s, many programmers didn't believe their creations would survive until the year 2000."

Much work has been done, but there is still a lot to do. The problems have multiplied. The more that is investigated, the more problems are discovered. All cost calculations — particularly in the U.S. where there is a greater focus on the problem than here — have had to be adjusted upward. The reason why the cost increases is that there is a limited number of people who are sufficiently knowledgeable to locate the mistakes in the

program codes and remedy them. As time rushes on, it becomes increasingly easy for them to demand more pay.

Operations problem

"The effect of the turn of the century on computers is not an IT problem. It is an operations problem," Christer Ekengren maintains. "No one is going to appear from some central IT authority and go through all the programs and fix all the glitches. The problem becomes larger and more expensive the longer we wait. It is the responsibility of each individual manager.

"The problem will be addressed in next year's budget work. Funds must be allocated. Besides, no auditors will put their signatures to financial accounts that have not dealt with the 2000 problem.

"In the COBOL programming language, by far the most common in currently used programs, the year 2000 causes further problems. The numbers 99 and 00 have been used for purposes other than indicating date — for example, as a scratchpad. Consequently, it is hard to predict what the programs will come up with when they encounter time indications containing these numbers."

Think tank

To gather all the knowledge now being accumulated on the subject, Ericsson Data has established a think tank. Experience and knowledge will be concentrated here. The hope is to prevent the same program having to be dealt with several times.

"The whole question of the year 2000 and the problems that will occur in com-

Linguistic confusion

Ericsson employees who, like Christer Ekengren, have given some thought to the 2000 problem have realized that there is a confusion of terminology. At Ericsson, when the year 2000 and larger issues are mentioned, many people associate directly to 2005 vision and its intermediary stage, "Wanted Position 2000." In short, the number 2000 is already taken in the Ericsson world.

If you consider the idea of the turn of the century closely, you realize that it occurs between the years 2000 and 2001 — so, the year 2000 is the last year of the current millennium.

On the other hand, it is New Year's Eve on December 31, 1999, that will feel special. And, apparently our friends the computers concur.

computers is unique in several ways — for example, the deadline is not negotiable and major investments must be made in something that definitely won't yield any dividends," says Christer Ekengren.

On the other hand, it's not impossible to see a few business opportunities. Equipment guaranteed to survive the turn of the century is likely to be easier to sell than untested equipment.

On the home page "<http://www.lme.ericsson.se/lmer/y2000/Index.htm>" you can find further information and also contact either Ericsson Data's think tank or the company-wide taskforce that is working on coordinating efforts to deal with the problems.

PATRIK LINDÉN

Back in the days when mobile phones were a novelty, they were considered to be status symbols for yuppies in three-piece suits. This is no longer the case, now that mobile phones have become a communication tool for the masses.

From yuppies to the people

a

t the Källan Spa and Hotel in northern Sweden, both the proprietors and many guests were tired of hearing the steady ringing of mobile phones.

"We hung up a mobile phone locker by the entrance, mostly as a joke," relates hotel manager Jan-Olov Eriksson. "Many guests ask if they have to lock up their phones, but we just want to remind them to turn them off."

The point they're trying to make is that if you go all the way to a spa to relax, then you might just be able to survive without your mobile phone for a while. Most of the phones in the locker are dummies and are just used to get the point across. An adjacent sign draws parallels to how churchgoers in olden days left their weapons in the armory before they were allowed to enter the church.

Another sign that mobile



phones are losing their aura as a status symbol is the phone holder for bicycles that Professional, an accessories supplier, has developed. It can be attached to the handlebars or any other round bar. It won't be long before every baby carriage has its own!

The Nordic countries are at the forefront when it comes to the widespread use of mobile phones in the general population. The Finns top the list with 33.5 percent of the entire population as proud mobile phone owners. Norway follows suit with 32.2 percent and Sweden holds a third place with 29.8 percent. The Danes lag behind slightly with 26.9 percent. All figures are from May of this year.

Upon closer examination of Sweden, men are slightly over-represented among mobile phone owners, as are those with a higher education. There are no geographical differences, however.

PATRIK LINDÉN



The accessories supplier Professional has developed a mobile phone holder for bicycles. Could a mobile phone be more down-to-earth than this? Photo: PATRIK LINDÉN

Photo the little picture: PICA PRESSFOTO/GÜNER ERHAN

Information systems must be adapted to customers!

Once the business unit for mobile systems, European standards implements an improvement program for shorter lead-times and better delivery precision, known as World Class Supply, information systems must be opened and start speaking the same language. This according to Stig Andersson at the business unit.

"We must bridge our various islands of information and give customers access to our processes."

The information systems available today are often enclosed and usually designated for financial accounting and production control. They are constructed for a world in which Ericsson stands for all work from the offer to final payment.

Deliveries have been on a "nuts and bolts" level and the installation processes have been very complex with many suppliers and transfers of responsibility. In the mean time, the situation is on its way to changing completely.

Let the customer in

"In only a couple of years, the majority of our sales may be volume-based, so that we become a part of the customer's own processes," Stig explains.

"The requirements placed on our information systems will then be entirely different. The customers will know what they want and will prefer to make fast and easy purchases. We therefore have to let them into our systems so that they can easily find ready-made packages. They need only type in one sales object number when placing an order."

Internet

Internet and the World Wide Web are natural ways of spreading information. The hassle of keeping track of Ericsson's local offices worldwide will vanish, since customers can easily log on and look for appropriate products and systems.

"Our aim is to establish a mail-order service. Customers will be able to choose products from on-line product catalogs, determine a price and send the order to any one of our Customer Configuration & Logistics centers, which act as the hub of the supply chain. Middlemen can then be removed."

The first customer will be connected to the system as early as this October.

Common system

There are currently many "information islands" that need to be connected for da-



"We must bridge our various islands of information and give customers access to our processes," says Stig Andersson at the business unit Mobile Systems, European standards." Illustration: LEIF SUNDBERG Photo: KURT JOHANSSON

ta interchange. This requires an infosystem with a structure and architecture that enables information to be integrated for communication between units.

A system called SAP/R3 is currently being installed worldwide. It is considered to be a de facto standard in the area.

The system uses thousands of parameters and hundreds of screens. Many people will be affected by its implementation and need training. This is one of the reasons implementation is taking so long.

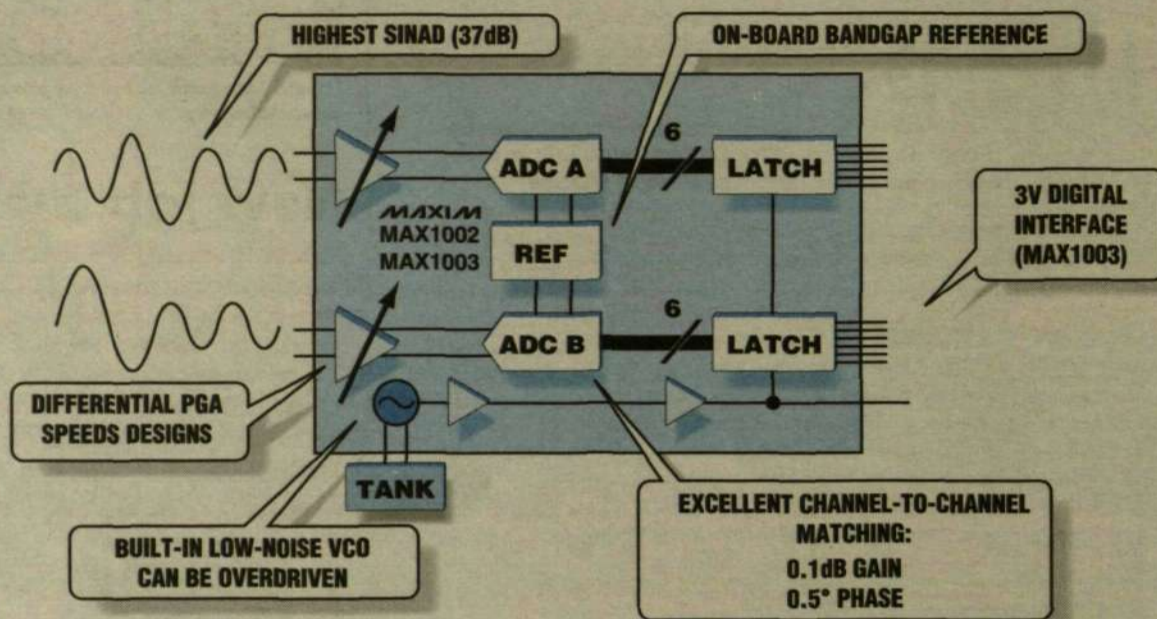
The "highways" between the different SAP systems will be so-called messaging systems.

"We expect that it will take a few years to implement the system in a larger unit such as Ericsson Radio Systems or a larger local company, so despite our efforts at standardization, we will have problems with diversified support tools for a long period of time," Stig Andersson concludes.

LARS CEDERQUIST

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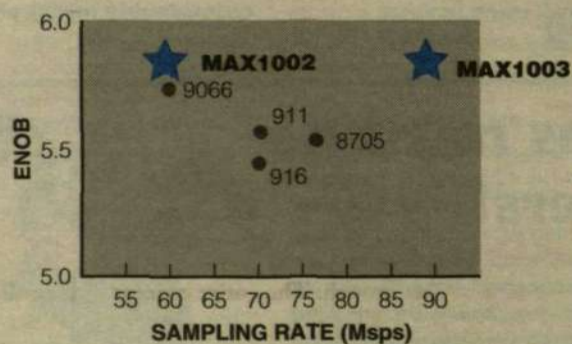


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Right phone to the right customer at the right time

With its focus set clearly on the customer, Ericsson Mobile Communications is poised to implement a new method to supply the market with telephones. Time To Customer (TTC), is a far-reaching, worldwide project to be implemented in a very short time span. "We have recorded dynamic growth, and now it's time to change course and find new roads that will enable us to continue our expansion," says Håkan Liedman, manager of the TTC improvement project now being conducted by Ericsson Mobile Communications.

TTC is designed to make the

ous parts of world to implement proposed changes in the organization and develop the new computer system. Many changes will be made in present organizational routines extending from supplier to customer.

One of the projects is a global undertaking whereby all Ericsson companies will gauge key business ratios equally. Other projects are focused on control routines used to process customer orders and customer-controlled distribution. Two other projects will key on improving Ericsson's understanding of customer needs. Another will concentrate on improving the quality of information at the local company level to enhance

have a fairly thorough command of English, some words do not always mean the same thing. A great deal of energy is spent on clarifications to make sure we all understand each other and agree on various issues," continues Paul Fanelli.

There are no patented answers in the TTC project. It's essential, therefore, that as many employees as possible take part in the process of change and that their experience is used wisely.

• How will employees be motivated to join in the process of change?

"I believe they will derive satisfaction and motivation simply by making customers satisfied. Everybody should feel a sense of personal involvement in providing better service," says Claes Lagerström, manager of TTC implementation in Europe and Asia.

According to Mr. Lagerström, continuous reports of improved key ratios and other positive signals will provide employees with information on actual results of the Time to Customer project.

"If we succeed in conveying our message effectively, I believe our employees will find greater job motivation and satisfaction." Mr. Lagerström continues.

• TTC will lead to various changes. Will it also result in job redundancies?

"TTC is not a rationalization project designed to reduce the work force. It is concentrated on developing new work methods that will contribute to the continuation of successful business operations," explains Håkan Liedman.

He does not believe there is any cause for concern over personnel cutbacks during a time characterized by dynamic market growth. The entire concept of TTC should be regarded as a prerequisite for continued growth.

GISELA ZEIME

TTC – a global project to pave the way from factory to customer

path from the supplier, starting in the factory, to distributors and finally the end-user, as simple and reliable as possible.

Control groups

A major objective of TTC is to unify all Ericsson companies worldwide, getting them to work in compliance with the same methods. Control groups have been established in Europe, Asia and the Americas.

"This will be a major challenge. Companies in different parts of the world have always worked in accordance with their own individual methods," Håkan Liedman continues.

The organizational plan began to take shape on May 1, 1997, when staff personnel were assigned to TTC. A computer support system for complete global solutions is also under development in London. Experts from all sections of Ericsson are taking part in the development work. The system is expected to be ready for test operations in February 1998.

Seventeen projects have been started at Ericsson units in vari-

ous parts of world to implement proposed changes in the organization and develop the new computer system. Many changes will be made in present organizational routines extending from supplier to customer.

Satisfied customers

Customer satisfaction is the overall objective of Time to Customer, a project designed to increase Ericsson's understanding of customer demands and to provide customers with the products they want. The dynamic market for mobile telephones and growing competition is forcing the need for new schools of thought, a new approach.

Ericsson's delivery precision is expected to reach 90 percent by year-end 1997. A lofty and difficult objective to attain, some people may think, but Paul Fanelli believes it can be done. Mr. Fanelli is in charge of Time to Customer implementation in North America.

"The importance of this objective is such that our organization is prepared to stand behind it and work hard for its achievement," he says.

Clear definition

"Although most of our people



Customer satisfaction is the overall objective of "Time to Customer," a project designed to increase Ericsson's understanding of customer demands and to provide customers with the products they want.

Photo: THOMAS MAGNUSSON

diary



Harald Simmons, at his new job at Enterprise Networks. Photo: PETER GUNNARS

New job, new country

Harald Simmons from the Netherlands started a new job assignment on August 11th as head of marketing communications for Enterprise Networks. Before moving to Sweden, the Dutchman worked as marketing communications and press relations manager of Ericsson Business Mobile Networks BV, the "Dect company" in Amsterdam. He shares his thoughts during his first week in a new country.

Sunday: Woke up in a new country this morning. I'm glad I brought some coffee from home. It was too early to go shopping and my day cannot start without coffee. Later, I took a walk in my new neighborhood in Södermalm, a residential area in the southern part of Stockholm. I was amazed by the silence. It will be an early night tonight. I start my new job in the morning.

Monday: I was filled with expectations as I drove to Nacka Strand. The building is the most beautiful Ericsson office facility in all of Stockholm, perhaps in the world, many people say. My first day was chaotic, like most first days at new jobs. I met a lot of people and familiarized myself with new equipment, including a cordless telephone and portable computer. It will take time to get used to the flexible office and not having my own desk.

In the evening, I got together with a colleague from the Netherlands and we watched the fireworks display at the Water Festival.

Tuesday: We had our first departmental meeting today. I would like to get to know these people, so that they can accept my presence as natural. Elisabeth, Eva, Agneta, Amelia and Anita have had a difficult year, and I want them to talk openly about it. We will have to work together to redefine the department's objectives, and it will require sacrifices and hard work by everybody. I also met my new boss, Richard (Richard McHugh is the new sales and marketing manager; editor's note). He started the week before I arrived and probably

faces a tougher job than I do.

Wednesday: Probably the funniest experience I've had so far. During a review of Swedish tax laws, we got on the subject of parking regulations. My contact person said if I have foreign license plates on my car, I won't have to worry too much about parking tickets. Just a few minutes later, I found my first Swedish parking ticket attached to my windshield. I had to laugh. I'm sure the car will present some problems. Back at the office, I experienced some minor difficulties with my computer and voice mailbox. I solved the problems myself simply by reading the instruction book.

Thursday: I experienced the contrasting features of my new job for the first time today. Made some headway with the budget, which will require a lot more of my time. I had lunch with a colleague from Singapore. The personnel department sent me forms I had to complete. I also took my first ride on Stockholm's subway today.

I'm having a difficult time with all the messages I don't understand, which reminds me that I have to book Swedish language lessons.

Friday: It's hard to forget my former business unit in the Netherlands. It seems like somebody from Holland comes in almost every day to say hello. As my first week on the new job draws to a close, there are so many new impressions that I can barely distinguish one from the others.

I'm going to have a party at home tomorrow. It's just as important to enjoy life during your leisure time as it is at the office.



We plan to launch two telephones in Japan during the first quarter of 1998, says Göran Skyttvall, acting president of Ericsson Mobile Communications Japan.

Photo: KURT JOHANSSON

Launch in tough market

In the beginning of 1998, Ericsson plans to launch mobile telephones in Japan, reputedly the world's toughest market. It should be a valuable learning experience for Ericsson Mobile Communications Japan K.K. The launch is also expected to provide knowledge that can be applied to meet projected large-scale competition for GSM telephones in Europe, phones that will be manufactured by Japanese companies.

A primary objective of Ericsson Mobile Communications Japan is to become one of the country's five largest suppliers of mobile telephones. Established in January 1997, the company has 15 employees today and expects to increase its payroll to 25 within the next year.

Ericsson and Marubeni, a leading Japanese trading house, reached a formal



Takashi Shinozuka is Executive Vice President of Ericsson Mobile Telecommunications Japan.

agreement in the spring of 1996 to establish a joint-venture company to market and sell mobile telephones. The Swedish company owns 70 percent of Ericsson Mobile Communications Japan, and Marubeni owns the remaining 30 percent. In terms of invoiced sales, Marubeni is the seventh largest company in the world, with business activities in a broad range of industrial sectors.

Ericsson's development of mobile telephones for the Japanese market is concentrated in two locations, at RTP (Research Triangle Park) in North Carolina and at the development center established in February 1996 by Ericsson in Japan, a unit that belongs for organizational purposes to Nippon Ericsson K.K. Telephones for the Japanese market are manufactured at the Kumla factory in Sweden.

"During the first quarter of 1998, we plan to launch two telephones in Japan, one for 800 and the other for 1500

MHz," explains Göran Skyttvall, acting president of Ericsson Mobile Communications Japan. One of our most important missions this autumn is to develop relations with operators and distributors. We shall also create a sales network to nurture Ericsson's image and establish our trademark in the Japanese market," Mr. Skyttvall continues.

"I believe Ericsson telephones have a very promising future in Japan, but it will be tough to penetrate the market as the eighteenth supplier and compete with such domestic stalwarts as Panasonic, NEC, Sony and Mitsubishi."

Weight and volume

Like all other consumer products, the key features will be quality, color, form and design.

"Weight and volume are particularly important features in mobile telephones," says Takashi Shinozuka, Executive Vice President of Ericsson Mobile Telecommunications Japan. Mr. Shinozuka was employed by Marubeni for 32 years before joining the joint venture company, and he hopes to share his experience in Japanese marketing with the new venture in mobile telephony.

As for GSM telephones, no Japanese company has established any form of large-scale operations in Europe.

"But they will get there in two to three years, and the lessons we learn by competing with them here in Japan will provide valuable experience when we encounter them in the European market," explains Mr. Shinozuka.

Part of the personality

Tord Nybleus, marketing manager for Ericsson's mobile telephones in Japan, also believes in a bright future for Ericsson's telephones in the Japanese market. He also underlines the importance of humility in the company's market approach.

"We are not focusing primarily on Japan's young mobile subscribers, but rather a slightly more mature audience. We're targeting a market segment that doesn't hesitate to buy foreign products. A certain symbol of status is associated with clothes and automobiles made in Western countries. The mobile telephone is a reflection of its owner's personality, like the wristwatch he or she wears," explains Mr. Nybleus.

GUNILLA TAMM

Japan is a tough market with several domestic companies in competition with each other and international players. Ericsson has three companies in Japan, a wholly owned subsidiary and two joint-venture companies. Ericsson also plans to open a research & development center soon, a statement of our intention to stay in the Japanese market, says Morgan Bengtsson, President of Nippon Ericsson K.K., the wholly owned subsidiary. Ericsson has made serious inroads into the Japanese market during recent years.

Sun rising in the East for Ericsson

In terms of mobile telephone subscribers, Japan is the world's fastest growing market, with the island of Hokkaido in northern Japan accounting for the most dynamic development.

"Our mobile network was opened in December 1996, and we already have more than 100,000 subscribers. Of course we're pleased with the market's rapid expansion, but the development has gone almost too fast," says Kiyoshi Terashima, President of DTD, Digital Tu-Ka Hokkaido Co.

"When we booked the order in November 1995, the system was scheduled to be made operational in July 1997, but the customer was anxious to begin commercial operations and the start-up date was moved forward several times," explains Bo Sjunnesson, Manager of Nippon Ericsson's office in Sapporo. "Even when the system was placed in operation last December, it was a few weeks ahead of the revised schedule."

Established in the summer 1995, the two major owners of DTD are Nissan Motor and Japan Telecom Co.

"It was important for us to make DTD a name known to the general public, and we started marketing the name as soon as DTD was founded," Mr. Terashima continues. "A youthful TV talent was introduced in DTD's advertising campaigns, and she soon became established as our mascot. In December 1996, just before the system was placed in commercial operation, more than 80 percent of the general public was familiar with DTD, and the figure today has risen to more than 90 percent. The company started selling subscriptions one month before the mobile system was placed on-line, and 35,000 persons lined up immediately."

Kiyoshi Terashima is pleased with Ericsson as a supplier and the system quality it delivers. He points out, however, the importance of improving voice quality in mobile telephony. In the past, it was acceptable to settle for voice quality that was marginally inferior to fixed telephony, but all that is changing. Demands on voice quality have increased in parallel with the growing number of young mobile subscribers. Many of today's youthful subscribers have previously used a Personal Handy Phone System (PHS), a simplified form of mobile telephony restricted to local coverage, but with voice quality standards virtually equal to the quality of wired networks.

Competition between mobile operators in Japan is extremely intense, probably much tougher than anything experienced by GSM operators in Europe. Voice quality and various added functions will become increasingly important elements in competition between Japanese mobile operators.

Compared with the U.S. and Europe, the concept of wireless data communications is not as widespread in the Japanese market. Although interest in the Internet is rising, Japan remains far behind the U.S. in terms of "cyberspace."

"In Japan, we have a proven record as a nation noted for its development of technically advanced electronic products, but we are not nearly as skilled in developing applications," Kiyoshi Terashima explains.

It's only a matter of time, Mr. Terashima adds, before Japanese subscribers begin to show greater interest in mobile data communications, following the same trends established in Europe and the U.S.

"When the time comes, it's essential we have the capability to meet the expectations and demands of our customers. And we intend to meet market needs in cooperation with Ericsson," concludes Mr. Terashima.

TEXT AND PHOTO: GUNILLA TAMM



Kiyoshi Terashima, President of Digital Tu-Ka Hokkaido Co.



Time for even more products in Japan

When Tomas Hilläs, President of Ericsson Toshiba, talks about Ericsson's mobile telephone mission in the Japanese market, he's not referring to new customers or new regions. Instead, he stresses the importance of increasing the capacity of mobile networks serving today's subscribers in Japan and creating better coverage in subways and tunnels, for example.

Tomas Hilläs has been working in Japan for nearly five years, the first two as manager of Ericsson Toshiba's office in Osaka and now as president of the company, which has its headquarters in Shin-Yokohama. Ericsson Toshiba also has branch offices in Tokyo, Nagoya, Fukuoka, Sapporo and Kanazawa. The company has 430 employees, with a projected increase to about 500 by year-end 1997. Personnel turnover among local employees is very low.

Fastest growth

During his years in Japan, Tomas Hilläs has experienced first-hand the explosive development in the number of mobile subscribers, culminating in the nation's emergence as the fastest growing mobile telephone market in the world today.

"When I moved here, mobile telephones were a very unusual commodity. Today, almost everybody has one, especially younger people," he says.

Ericsson has six customers whose mobile telephone systems cover large parts of Japan. In April 1994, Tokyo Digital Phone became the first company to place a system in commercial operation. Kansai Digital Phone in Osaka and Central Digital Phone in Nagoya followed soon after. In January 1996, Digital Tu-Ka Kyushu in Fukuoka became the fourth operator to place a system in operation and, in December, Digital Tu-Ka Hokkaido in Sapporo started com-



Tomas Hilläs is president of Ericsson Toshiba Telecommunication Systems K.K. in Japan.

mercial operations. Digital Tu-Ka Hokuriku in Kanazawa became Ericsson's sixth Japanese customer when its mobile system went commercial in January 1997.

Ericsson's customers have a 14-percent share of Japan's total market for digital mobile telephony.

NTT DoCoMo is Japan's largest mobile operator with 53 percent of the market for analog and digital mobile systems. Ericsson is a major supplier of MDE, an integral part of base stations for digital systems to NTT.

"The networks operated by our customers have not reached fully built out; better coverage and other improvements are needed," says Tomas Hilläs. Underground coverage in subways and tunnels, for example, need further development. As for indoor coverage, improvements are needed in shopping centers and other public facilities. Ericsson's pico base stations were developed specifically for these types of premises.

Personal Handy Phone

Personal Handy Phone System (PHS), a wireless telephone system similar to the DECT system, has noted significant success in Japan. According to Mr. Hilläs, PHS does not compete with conventional mobile systems for the Japanese standard (PDC), but rather serves as a complement. He also considers PHS a mobile market stimulant. It's quite common for people to start with a Personal Handy Phone and convert later to a "real" mobile telephone system. Many subscribers also feel there is greater status attached to a mobile telephone, compared with PHS.

Until now, Ericsson Toshiba has concentrated exclusively on mobile telephone systems.

"But it's now time to start selling other Ericsson products in Japan," Mr. Hilläs says. He believes the Infocom Systems business area has the strongest growth potential. In the beginning of 1997, Ericsson also made a strategically important move into the Japanese market for public telephony. The initial penetration was made when International Telecom Japan placed an international station with intelligent network services based on AXE and UNIX platforms in commercial operation.

MiniLink, Ericsson's radio link, is another potentially promising product for the Japanese market, according to Tomas Hilläs.

Tomas Hilläs enjoys living in Japan, and he believes many people have an inaccurate impression of the Japanese lifestyle, believing the people just work, work and then work some more.

"Of course there's a lot of work to do and we put in long hours but, for me at least, life would be the same even if I worked in another country," he says. "Those of us who have been here for a few years would like to stay for a long time. As far as I'm concerned, the quality of life in Japan is very high, and I thoroughly enjoy living here."

GUNILLA TAMM



Many young people use mobile telephones, although it will probably be a few more years before these girls become subscribers.

Nippon Ericsson K.K. making progress

An extremely important development assignment for NTT DoCoMo of Japan, the world's largest mobile telephone operator, delivery of a new MDE base station and the establishment of an R&D center in Japan. There's a lot happening these days at Nippon Ericsson K.K., a company making serious progress in the Japanese market.

Morgan Bengtsson is president of Nippon Ericsson K.K., a subsidiary that qualified as a "Major Local Company" on January 1, 1997. He describes the activities of the Japanese subsidiary of Ericsson.

Two years ago, the company moved to larger premises in an office building near Sophia University, but the facilities are now becoming overcrowded. The office building also houses the Japanese subsidiary of Tetra Pak but, aside from some administrative routines, the two Swedish companies have virtually no other common grounds for cooperation.

Morgan Bengtsson expects the number of Ericsson employees in Japan to increase by more than 100 persons this year. In addition to Nippon Ericsson K.K., there are two other Ericsson companies in Japan: Ericsson Toshiba Tele-



"The establishment of research and development activities in Japan is a declaration of Ericsson's intentions to remain here in the Japanese market," Morgan Bengtsson, president of Nippon Ericsson K.K. Photo: LARS ASTRÖM

communications K.K. and Ericsson Mobile Telecommunications Japan K.K., both of which are joint venture companies. The former is owned jointly with Toshiba and the latter with Marubeni, a major Japanese trading house.

Third generation

In April, NTT DoCoMo named Ericsson as one of the five companies chosen to take part in the system development of the third generation of mobile telephony including high-speed transmission of multimedia services. Ericsson is the only European company taking part in the system development project.

Other companies taking part in the project are Lucent Technologies of the U.S. and NEC, Fujitsu and Matsushita of Japan. A complete experimental system is due for delivery to NTT DoCoMo in December of this

year-end 1998, NTT DoCoMo will announce its final choice of supplier/suppliers to be contracted for its third generation system. About 15 engineering technicians at Ericsson Nippon K.K. are now working on the experimental system, and the group will probably be expanded to more than 20 by year-end. Most development work is taking place in Sweden, explains Jörgen Lantto, project manager.

R&D Center

"Our job here is to serve as a bridge, or interface, between Ericsson in Sweden, NTT DoCoMo and Japan's Ministry of Telecommunications."

"In parallel with development work, standardization efforts are also being conducted, and our job is to monitor and try to influence the progress," Mr. Lantto continues.

Jörgen Lantto and his staff comprise the foundation of the R&D Center Ericsson plans to establish in Japan. During the autumn, the R&D group will move to new premises.

"The establishment of R&D activities of this scope in Japan is one of our most important assignments of the year. The local need for technical skills and expertise has become much greater, compared with a few years ago, and we plan to recruit Japanese technical engineers, an important element in our cooperation with NTT DoCoMo," explains Morgan Bengtsson.

"The establishment of research and development activities in Japan is a declaration of Ericsson's intentions to remain here in the Japanese market," he adds.

Nippon Ericsson K.K. has also founded a new university prize to support telecommunications studies and research in Japan.

Ericsson's close cooperation with NTT DoCoMo started in 1991, when the large Japanese operator introduced its digital mobile telephone system. Ericsson was contracted to develop and deliver MDE (Modulator Demodulator Equipment), a control and communications unit in the base station. Development work and equipment supplies have contin-

ued ever since. The first deliveries of MDE for micro base stations were due for completion during the summer.

"Our cooperation with NTT DoCoMo played an important role in the Japanese mobile telephone operator's choice of suppliers for its new mobile system. By the same token, MDE was an important factor when NTT DoCoMo selected its partners for development of the third generation system. I don't believe it's an overstatement to say that MDE opened the door for Ericsson's entry into the Japanese market," Mr. Bengtsson continues.

Image campaign

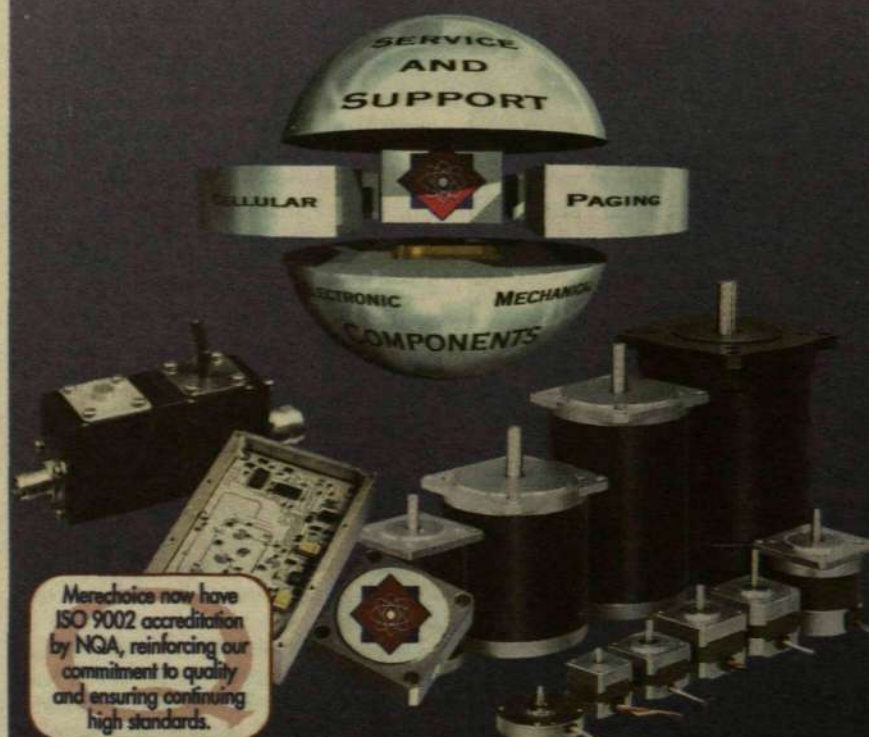
Ericsson is a familiar name to telecom operators in Japan, but completely unknown to the general public. To prepare for the introduction of its mobile telephones in Japan, Ericsson is now conducting an advertising campaign in the Japanese press to promote its corporate image and products. In addition to descriptions of Ericsson's operations in Japan, the campaign will also present historical facts about the Swedish company. Hopefully, the Ericsson name will be better known when it takes the next step into Japan's tough mobile telephone market.

GUNILLA TAMM

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Ericsson women world champs

Sweden won the gold medal in the women's relay event of the Orienteering World Championship Games recently in Grimsstad, Norway. The Swedish team led the race from start to finish.

The world championship team included two women from Ericsson, Anna Bogren of Ericsson Radio Access in Kista, and Marlena Jansson of Ericsson Mobile Communications in Kumla.

This year's gold medal was their third consecutive world championship medal in the relay event. Anna and Marlena were also members of Sweden's 1993 gold medal winning team in the U.S., and garnered second place silver medals at the 1995 world championship in Germany.

Both women have also enjoyed success in individual world championship events. Anna won the gold medal over the short track in 1993 and, in 1995, she and Marlena tied for third place in the world championship short track race in Germany.



Ericsson is a major sponsor of orienteering.

Photo: KEITH SAMUELSON

Higher flow-through rates

Inventory Turn Over (ITO) is a means of gauging the turnover rate of product component inventories. Ericsson's factory in Nynäshamn has established an objective to increase its ITO by a factor of 10 this year, followed by an increase of 20 times next year.

Based on its established objective, the factory is striving to improve capital employment efficiency, rather than tying up money in inventories of products on shelves.

Information from the finance department shows the Nynäshamn plant is making significant progress, illustrated by a sharply spiraling curve from December 1996 toward its goal to reach the tenfold increase by year-end 1997.

"Everybody involved in ITO and other people who support the factory's delivery flow are doing a wonderful job, from materials procurement and purchasing through storage and production to final delivery. Their efforts have been illustrated clearly by the strong increase in materials turnover during the first half of 1997," says Mikael Granlund, finance manager at the Nynäshamn factory.

The positive trend was sustained through July despite a dramatic increase in the value of inventory reserves during Sweden's industrial vacation period. The Nynäshamn factory was forced to implement a lower delivery rate than originally planned during the summer because some suppliers were not able to deliver planned quantities of materials, which caused the increase in inventory reserves.

Two DECT installations to Russia

Two DECT-based DRA 1900 radio access systems were inaugurated in August for public applications in Vad and Medyan, Russian communities in Nizhni Novgorod. The new installations are the first DECT systems installed in Russia.

In virtually no time at all, the separate systems were planned and installed. The contract was signed near the end of May during Sviaz-Expocomm 97, a large telecom exhibition in Moscow. The installation in Vad serves 600 subscribers, and the Medyan system will initially serve 200 subscribers. The installation in Medyan has been augmented by a local MD110 exchange for public telephony.

Krupnov attended

Vad and Medyan, which are situated about 100 kilometers apart, were honored with individual inauguration ceremonies. Alexander Krupnov, Russia's Minister of Telecommunications and Nail Ismailov, Director of Svyazinvest (a government-owned telecom investment company) attended both ceremonies.

Ivan Sklyarov, Local Governor of the Vad/Medyan region, and Vladimir Lyulin, director of the local telecommunications authority, also attended the inaugurations. Ericsson was represented by Björn Hemstad of corporate marketing, Ken Owen, Executive Vice President of Ericsson Corporation and Svante Axling of business development.

Another order booked

During the drive between the two Russian communities where Ericsson's systems were inaugurated, local authorities booked another system for installation in Nizhni Novgorod. The region's third system will serve 600 subscribers and is



Banners adorned the streets of Moscow during the Sviaz exhibition this summer. The message announced in Russian: "It's all about communication between people, the rest is technology."

Photo: THORD ANDERSSON

scheduled for delivery and installation in two months!

"The new order could represent a major breakthrough for DECT-based, DRA 1900 radio access systems in Russia," says Svante Axling, who has worked with a broad range of DECT issues in the Russian market during recent months. "I have noticed a general trend among Russian telecom authorities, who have shown

keen interest in new and promising technical solutions."

DRA 1900 is virtually tailor-made for a country like Russia, which has a strong need to develop and expand its fixed public network in many different locations. Because of its planning and installation ease, DRA 1900 offers the perfect solution for Russia's telecom requirements.

THORD ANDERSSON



Network for information providers

Ericsson Radio Systems in Kista hosted the second "Ericsson Infopro Conference," a three-day seminar conducted toward

Kista the end of August.

The 24 participants call themselves "information providers" and include librarians, patent application personnel and standardization specialists.

The common denominator for information providers is their joint endeavor to gather various forms of external information for internal distribution throughout Ericsson.

The first conference was held a year ago at Ericsson's Canadian subsidiary in Montreal. The agenda this year included information on patent application routines and BIC (Ericsson's database for detailed information about competitor companies). A joint project conducted by the group also involved central



A visit to the Kumla telephone production plant was included in the conference agenda. More than 20 librarians, patent application personnel and standardization specialists attended the conference in Kista. Pictured above are (l-r): Tamara Keating of Canada, Karin Gartzell, Sweden; Angeles de Pablos, Spain; Rose-Marie Adur, Sweden; Teddy Bohanchuk of the U.S. and Erhan Sayin, Turkey. Linda Hedström was their guide.

Photo: MARIA GRANATH

procurements for the INSPEC database used by all Ericsson units.

Copyright issues

Two external lecturers were invited to this year's conference. Professor Jan Rosén of the Stockholm School of Economics discussed copyright issues, and Morten Nicholaisen of M.A.I.D. Sweden presented his views as an external in-

formation provider.

"An important mission for this conference is to create personal contacts. A company like Ericsson needs a functional network, and personal contacts help everybody raise their service level," said Karin Gartzell of Ericsson Radio Systems in Kista, a member of the organizational staff for the conference in Kista.

GUNILLA TAMM

Winners of Viking Boat Race

One of the major events of the Stockholm Water Festival, held at the beginning of August, of the traditional Viking Boat Race. This year, it was a team from Ericsson Saab Avionics, which posted the best time of all Ericsson teams that competed in the regatta staged in Stockholm's scenic Karlberg Canal. Ericsson Saab Avionics advanced to the quarter and semifinals, placing 22nd

among a field of 1,200 rowing teams. The intracompany competition on August 14 was also won by Ericsson Saab Avionics, whose name has been engraved on the Ericsson Trophy. The team was the best of all 144 Ericsson entries. The Steel Lions, as the team is also known, distinguished itself by recording the fastest time during the Ericsson team competition.



Designer telephone for Bond

"Tomorrow Never Dies," the latest in a never-ending series of James Bond movies, will be released around Christmas this year. In the new film, James Bond will use an Ericsson telephone for a broad range of activities. Agent 007 uses the phone as a remote control unit for his car, to break into safes and open doors. Bond, James Bond, also uses it to make telephone calls! Unfortunately, the telephone is available only in the world of cinema. It would be the rage, otherwise, for all lovers of gadgets and gimmick equipment.

Trainee program at Ericsson Microwave

Ericsson Microwave plans to start a new trainee program this autumn. Nine job placements have been made available for engineering graduates with preferred training in electronics, engineering physics and computer technology. The job application period ends in a few weeks, followed by comprehensive work to screen and choose among all the applicants.

The decision to start a trainee program for recent engineering graduates at Ericsson Microwave was made in the spring.

For a period of 18 months, nine men and women will participate in a training program that will combine theoretical studies and job assignments at various Ericsson companies.

Every trainee will know from the beginning where he/she will work after completing the program, and individual training will be adapted to his/her future job assignment.

Two trainee placements will be situated in Borås and seven will be made available in Mölndal. Every trainee will have a "home unit" and his/her own guidance counselor, who will be responsible for the program.

The trainee program was marketed during the spring through newspaper ads in Göteborgsposten, Ny Teknik and student newspapers at Chalmers and other technical colleges and universities. Personal letters were also sent to recent engineering graduates, and posters were displayed at various institutes of higher learning. The final day for job applications is September 12.

NICLAS HENNINGSSON

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Seated are Hans Gustafsson, ETX and Jörgen Hjert, EKA. Standing from left are Rickard Hammarström, Staffan Robertsson, Ulf Broomé, all of EKA; Leif Malmgren and Krister Herranen of ETX, Mats Svensson of EKA, Ulf Wallgren of ETX and Peter Richnau of EKA.

Line interface board cooperation

Ericsson Telecom and Ericsson Components will join forces to develop a line interface board (LIB) concept for conventional telephony in the new access system called Axess-M. After six months of intensive planning, cooperation between the Access product unit of Telecom and the Line Access sector of Ericsson Components was officially started on August 27.

The cooperation project includes all areas of microelectronics related to LIB functions within Ericsson Components.

Axess-M, the new access system, is the next generation of Ericsson's AXE exchanges, which will handle everything from conventional telephony to broadband data communications with vastly improved flexibility features for customers.

Ericsson conquers Kazakhstan



Ericsson has established business operations in **Kazakhstan**, another former Soviet republic. Ericsson International Ab recently opened an office at 242 Furmanov Street in Almaty, the capital of Kazakhstan, a nation with a wealth of oil resources and a population of 17 million. Reijo Ahola, a man with extensive experience from development of Ericsson's market in China, is the office manager.

The office was officially inaugurated this summer in conjunction with KITEL '97, a large industrial and telecommunications exhibition in Kazakhstan.

Telecom authorities

The ceremony was attended by representatives of the Kazakh Ministry of Telecommunications and Kazak Telecom, as well as telecom authorities from neighboring republics in Uzbekistan and Kyrgyzstan. Ericsson's new office in Kazakhstan

will provide market support for the latter two republics, in addition to Turkmenistan and Tajikistan.

"Without business representation, there is no business," says Holger Ronquist, corporate marketing manager for the entire region encompassed formerly by the USSR, with the exception of Ukraine. Kazakhstan, a nation under economic development, offers strong business potential for Ericsson.

Broad presentation

Ericsson took part in KITEL '97 with a broad presentation of products and solutions from all Ericsson business areas. Participation in the Kazakh exhibition was handled by Ericsson Events, under the management of Marianne Thunberg.

The KITEL '97 fair provided an excellent springboard for Ericsson to make a strong impression and resume its place on Kazakhstan's business map. AXE exchanges were sold in the 1980s when Kazakh's capital was called Alma-Ata.

At a recent government-level meeting of investors that at-



Ericsson took part in KITEL '97 with a broad presentation of products and solutions from all Ericsson business areas. In the middle Reijo Ahola surrounded by colleagues.

Photo: MARIANNE THUNBERG

tracted more than 50 multinational companies, Nursultan Nazarbaev, President of Kazakhstan, said the future of his nation will be characterized by strong economic growth in several industrial sectors, with particular emphasis on mining, agriculture and, perhaps most prominently, oil extraction. The former USSR republic expects to become a world leader in the oil industry.

"Ericsson has already secured its first orders, and total order bookings in Kazakhstan recent-

Ericsson on display in Geneva and Dallas

A new and highly prestigious telecom exhibition will be held soon in Geneva. Telecom Interactive '97 **geneva & dallas** will be staged September 8-14 under the auspices of the International Telecommunication Union (ITU). It is expected to attract companies from all sectors of the infocom industry.

Telecom Interactive '97 will focus on interactive multimedia, with particular emphasis on the Internet and interactive TV. More than 140 companies will participate in areas ranging from data communications and telecom to media and the entertainment world.

Ericsson has booked a 150-square meter stand to show a variety of communication solutions for end-users - at home, at work and "on the road."

The display will include a variety of products for fixed networks, such as Phone Doubler, broadband access solutions through ANx-DSL and the Multimedia Workgroup System that facilitates global conferences via PC screens. The mobile exhibition will feature video presentations of GSM, CDPD applications such as Internet access for D-AMPS as well as Ericsson's

W-CDMA third generation broadband mobile telephone system.

In parallel with Telecom Interactive '97, the annual PCS Fair in Dallas will be held September 10-12. Ericsson will highlight W-CDMA, CDPD applications and GSM video presentations at the exhibition in Texas.

A little gossip from London

The Sun and Daily Star, two of England's leading tabloid newspapers, recently reported **london** that Victoria, a member of the famous Spice Girls pop group, bought an Ericsson 788 mobile telephone as soon as the compact new model hit the market. She uses it often, the newspapers reported, to talk to her boyfriend, soccer star David Beckham.

Important papers on intranet

Tax declaration forms and other official documents from the Nordic countries have been gathered together in the intranet operated by Mobile Systems, one of Ericsson's business areas.

The service, provided mainly for foreign employees and their families, is an Ericsson pilot project. In addition to a large amount of Ericsson forms and papers, a variety of official documents and insurance company forms are also available under the web site button marked "Services." Eventually, forms and documents from Japan, the Netherlands and England will also be included.

The top-level page for Mobile Systems' intranet was opened in January 1997, and is designed to provide the business area's 34,000 employees with links to all units.

Establish and maintain

A sense of excitement surrounds the approaching autumn months in Kazakhstan's telecom market. GSM licenses will be awarded soon, and it's essential for Ericsson to establish and maintain a position of telecom market prominence. The nation offers strong potential for future business activities.

Ericsson Radio Systems in Kumla is now increasing investment for the industrialization of new circuit boards and manufacturing methods. The ambition is to create a competence center for all aspects of circuit board production.

Short time at Kumla

Ericsson has expanded rapidly in Kumla in recent years.

Both the Kumla plant, which manufactures mobile phones, and the circuit board plant have been expanded and are now ready for new operations. Compared with its "big brother," however, the circuit board plant is not significantly increasing staff, since the increased volumes will primarily be handled by external circuit board suppliers.

"Our production niche is to industrialize new products and to manufacture the most advanced circuit boards," relates plant manager Bengt Strömberg.

New presses and drills

The rate of investment is high. New presses were recently installed, and during the autumn, new drills and drill automation equipment, as well as a new brown oxide line and an additional laser drill, will be installed.

Acting as a supplier to Ericsson's circuit board plants and to subcontractors is the plant's primary responsibility, but the base for operations today are the so-called Time-To-Market services, which means contributing to process and product development.

In practical terms, this means resources are concentrated to two areas:

- Applied research and development. Ericsson's own development engineers work together with consultants with both the industrialization of new processes and pre-studies in product and process development.

- New Product Introduction (NPI). This work focuses on product development and the industrialization of circuit boards for development units within Ericsson.

The circuit board plant will be conducting research and pre-studies for new circuit board technology and will then seek partners for development projects in the most promising areas.

Joint development

"We have strengthened our own development resources, but pre-studies and projects must always be conducted jointly with other Ericsson units and external partners," says marketing manager Jörgen Ekengren. "In this way, we can coordinate the know-

ledge and experience that is available in this area, both within Ericsson and externally."

External suppliers

methods for pattern alignment, new test methods and new manufacturing methods for thin leads.

"Working in parallel to maintain a base of external suppliers is of great importance in ensuring that Ericsson will have sufficient supplies of new circuit board types," says Jörgen Ekengren.

In provisioning circuit boards, each customer must be able to select the services that are most suitable for their operation,

Circuit board plant re-opened on September 2

whether this means taking full supplier responsibility of finding other suppliers and verifying them.

"The service component in our sales is expected to increase in the future, and our ambition is to be able to offer every Ericsson unit that we serve a customized range of services, prototypes and mass production that satisfies the customer's requirements," concludes Jörgen Ekengren.

RUT HERMANSSON

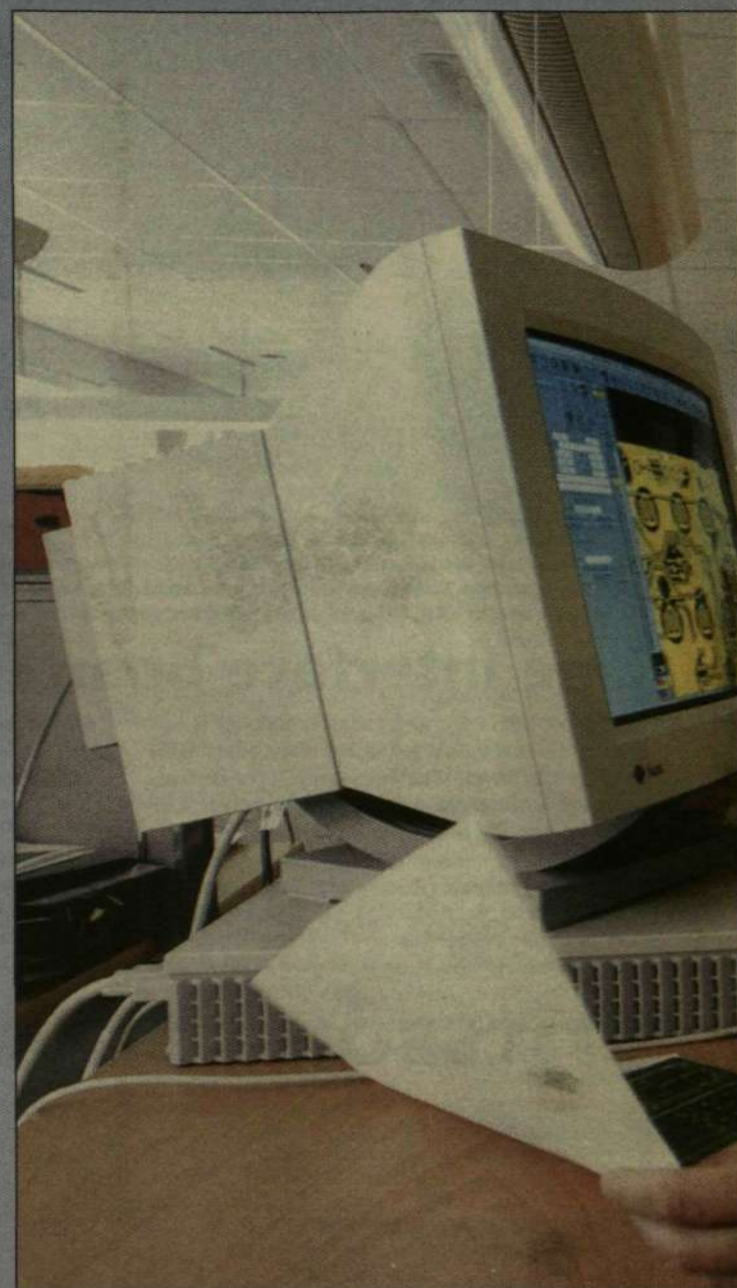
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RUT HERMANSSON

The Circuit Board Plant in Kumla

- The circuit board plant's expansion is being financed by the Kumla Municipality's property company.
- Inauguration took place on September 4
- Operations in Kumla started in 1962
- 249 employees
- The circuit boards manufactured or purchased in Kumla are primarily used in mobile telephones and radio base stations.



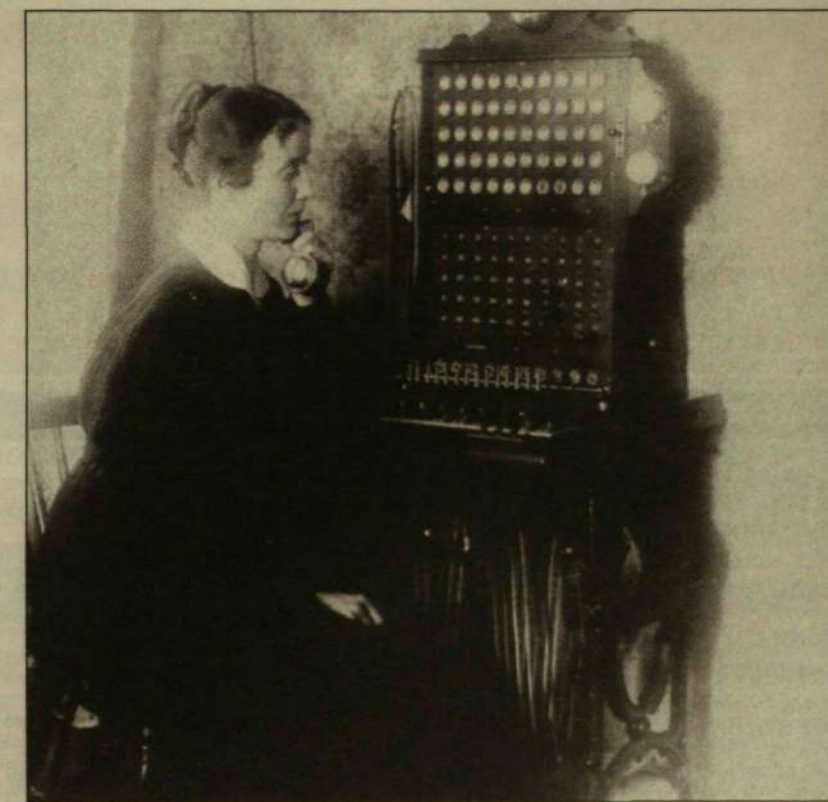
Examining model GH 688

Joakim von Bothmer is one of the engineers working to improve wiring technology for the benefit of various development projects.



High-paced investment

"Three new heat presses and a cooling press will be operational in October, which means that tasks that now take seven days to complete will only take five in the future," says Cecilia Hägg, who is responsible for the project.



Good telephone culture helps the customer - yesterday and today. L M Ericsson Data's telephone service is available on the intranet <http://edttleserv.ericsson.se>

No success without good communication

The ability to communicate with the outside world is a critical factor for a company's success. For Ericsson as a world-leading telecommunications company, management of its own telecommunications is just as important as the branding program.

Telephone culture is a part of the Ericsson culture. How we answer the phone and how calls are managed shapes the customer's perception of Ericsson.

"The starting point for our work is that the customer should always be served, whether the contact is mediated by a conventional telephone or a mobile phone," says Anders Henricson, chief project manager for the T97 project at L M Ericsson Data AB.

T97 stands for Telephony 97 and is the name of an improvement project being conducted jointly by Ericsson Data and Ericsson Radio Systems in Kista. The project began in April and will reach a peak during the autumn.

"Over the past few years, we have conducted an improvement project in telephony every year," says Camilla Söderström, who is responsible for project information.

Clear and correct

Answering the telephone in a correct manner. Being available. Being able to say where a person is or how far a service request has progressed. These are the key issues for managing telephone contacts in a satisfactory manner. Perhaps this sounds superfluous or seems like a repetition of the self-evident. But meeting these demands effectively using new technology demands skill and an openness for new opportunities.

"In the same way that Ericsson develops new technology for the global market, we are developing internal support for managing contacts more efficiently," says Anders Henricson.

His unit develops and tests software that allows employees with PC support

to use their telephones more efficiently. More user-friendly instructions for Dect and other products are also included in the unit's assignment.

"We work both with technology and software, because even though we have many technically knowledgeable people in the organization, that doesn't mean that everyone can take advantage of all the capabilities that today's advanced technology provides," says Anders.

Up-to-date telephone books

Ericsson Radio System's internal telephone book is one result of this joint project. Today it is hardly useful to print the internal telephone book in large numbers. It is often incorrect in several respects by the time it is distributed. At the same time, however, it is desirable to have at least parts of the telephone book on paper.

"We publish the telephone book on the intranet, which means it is always current. Users can then print out the parts that they need in their work on their PCs," says Camilla Söderström.

"Of course, this demands that each unit is responsible for keeping its own entries up to date," notes Anders Henricson. "We operate the computer system, and to maintain high quality of information, we must work together in an open relationship."

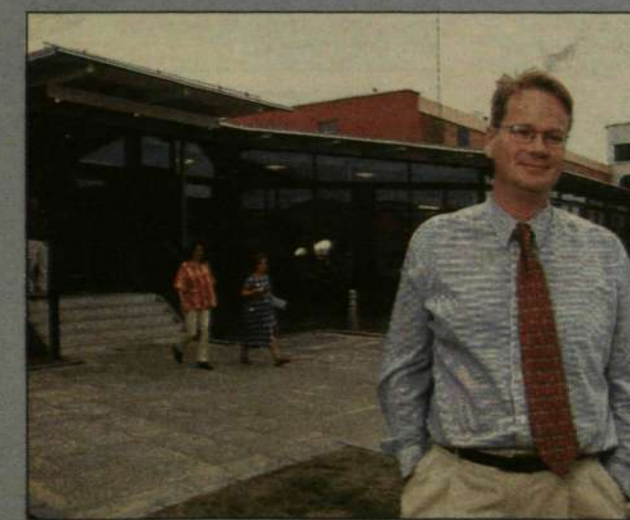
Training and information are the two ingredients that most employees will notice in the T97 project. Before new technology is unveiled, for example, in the show room that L M Ericsson maintains in Kista, it is tested in various pilot projects.

A final word. The next time the telephone rings, it may be an important customer whose call has been incorrectly forwarded by someone who is on a business trip but has entered the wrong code on his phone. Take care of the customer first. Then inform your colleague about T97 training and show him the Telephony Service on the intranet.

LARS BÄCK



More environmentally friendly plant
A new treatment plant was built when the plant was expanded. Lasse Hansson shows how copper residues from the process water are extracted so that the remaining water can be recirculated in the closed system. The extracted copper is sold and reused.



A resource for all of Ericsson
The "new" factory reinforces the ambition - which marketing manager Jörgen Ekengren energetically supports - to become a competence center for circuit board technology serving all of Ericsson.

vacancies

AT ERICSSON

■ This is a selection of vacancies within the Ericsson corporation. They are published in the electronic News system, which is being updated once a week.

For further information about advertising here, send a memo to LME.LMEJOB.

Contact no. 13 1997

Updated September 8

international

Ericsson Inc., Reston, VA (USA), EUS

REGIONAL CUSTOMER SUPPORT MANAGER - CMS40

● Will be responsible for managing the regional operations of 1 to 3 customer support organizations (ESO). Duties include hiring, developing, and managing a subordinate staff, providing technical support and problem management to customers, controlling budgetary matters, providing trouble analysis, prioritizing assignments for the region, formulation of routines, and monitoring the region's CMS40 system performance. Develop, direct, and coordinate all activities of the Ericsson Technical Assistance Center (TAC) which addresses the need for providing expedient restoration of cellular switching equipment. Making recommendations to manage the maintenance and cost-effective operations of all AXE switches and all related support equipment of Ericsson customers in the region.

Bachelor's Degree in Electrical Engineering or equivalent and at least 8 years experience in the telecommunications industry including: supervisory exp. in a technical support organization, exp. in the installation, testing, and maintenance of digital telephone switching systems.

Contact: Robert Goransson, CSO Director, EUS.EUSROBG, +1(703) 397-9005, or Tammi Terry, Human Resources - Reston, EUS.EUSTERR, +1(703) 397-9011 or Fax +1(703)437-7959.

Ericsson Eurolab Deutschland GmbH, our young Research & Development Centre in Herzogenrath near Aachen offers 4 new challenging positions within AXE Mobile Core.

AXE Mobile Core System Management is responsible for the system development of the core products used commonly by all Ericsson's digital mobile systems i.e. CME20 (GSM), CMS30 (PDC), CMS40 (PCS) and CMS88 (D-AMPS).

Within AMC we need to strengthen our efforts related to System Characteristics. The focus is on In Service Performance and Load Reduction. Therefore, we are looking for:

AXE 10 SYSTEM ENGINEER (CHARACTERISTICS)

● Your job would be to participate in Characteristics projects and to perform investigations/estimations within characteristics area. You will cooperate with colleagues within the Mobile Applications, BN and UAB.

We are looking for a system or software engineer with at least 2 years of Ericsson experience, preferable within AXE10.

Furthermore, AMC System activities are steadily growing, mainly due to fixed mobile convergence.

To meet this challenge we need to expand. Therefore, we are looking for

AXE 10 SYSTEM DESIGNER

We are participating in early project phases and are performing pre- and feasibility studies. We are also evaluating new technologies and performs tasks which require high competence and professionalism.

● To strengthen our capabilities for this type of system work, we are looking for an experienced system designer with more than 3 years of Ericsson experience in AXE10 design.

We are particularly interested in people who can provide significant competence in one or more of the following areas: AM System development, Signalling, Data Communication, O&M, Resource Module Platform, IN Development, Hardware Modernization, PDC

system, D-AMPS system. Due to the art of work performed, some travelling may be necessary.

Within AMC we need to strengthen our competence related to Intelligent Network and especially in the area of Service Control Functions (SCF) on a system level. Therefore, we are looking for:

AXE 10 SYSTEM ENGINEER (IN, INTELLIGENT NETWORK)

● Your task would be to perform investigations and issue technical reports related to IN. You would also give IN system expert support towards the four digital mobile systems and towards various committees such as PC-APT, PC-AXE and TC-AMC. Another important role would be to control and monitor ongoing IN activities within BR and BN.

We are looking for a system engineer with at least 3 years of Ericsson experience, preferable with SCF or SSF background.

Contact not later than 970930: project 12697, 12797 or 12997; EED Human Resources Doerte Kaulard +49 2407 575 163 Memo: eed.eeddka or Groupleader EED/UOR Mikael Boman +49 2407 575 241 Memo: eed.eedmrB

Still for the AXE Mobile Core System House, we are looking for a

GROUP LEADER AMC SYSTEM

● The main authorities and tasks are: AMC: take over a significant part of the AMC System activities. Supervise the operations of a new systems management group.

Leadership: Competence development of the staff according to AMC and EED rules and regulations.

Ensure the efficiency and competitiveness of the group. perform appraisals, participate in recruitment process and introduce new personnel.

General: Preparation of buffer plan. Budget proposal.

This position reports directly to the department manager.

As a suitable candidate, you are an Ericsson employee with at least 4 years of working experience and should have AXE10 experience.

Any managerial experience (e.g. group manager, team leader or project manager) or experience in the system area of a mobile or fixed Application is a clear advantage. The position requires initiative and good communication skills.

Contact not later than 970930: Department Manager EED/UO Ulf Gustafsson-Hennel Dial: +49 2407 575 26 Memo: eed.eedugh or Human Resources Doerte Kaulard Dial: +49 2407 575 163 Memo: eed.eeddka

Ericsson Eurolab Deutschland GmbH, our young Research & Development Centre in Herzogenrath near Aachen offers a new and challenging position within our System House AXE: We are looking for a

MAINTENANCE ENGINEER

The Traffic Control Subsystem (TCS) Department at EED is looking for a maintenance engineer to work with TCS maintenance tasks for all AMC markets. The AMC consists of the core subsystems that are common to the mobile applications CME20, CMS30, CMS40 and CMS88.

● The general responsibility of the maintenance engineer is to investigate and propose solutions on problems reported from our customers. This is done in close co-operation with support centers all over the world.

The main authorities and tasks are: Analyses and investigate trouble reports on released TCS products. Write and verify corrections in target and simulated environment.

Propose solutions. Design and verify TCS sub-

system products according to the RPC (Rapid Product Change) process.

As a suitable candidate, you are an Ericsson employee and should have experience in design maintenance activities. Any test experience in target and simulated environment as well as experience in the traffic control area is a clear advantage.

Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Furthermore you should also be customer oriented. Fluency in written and spoken english is a prerequisite.

Contact/Application not later than 970930: Human Resources: Doerte Kaulard +49 2407 575 163 Memo: eed.eeddka or AMC Mobile Network Lars Andersson +49 2407 575 662 Memo: eed.eedlara

Furthermore, EED's PAX System House is looking for a

TCM TESTER/SENIOR TCM TESTER

The EEDIXISO section within our PAX system house is responsible for Product Line Configuration Management for CME20 Switching Systems. We provide test configuration management for CME20 design projects from feasibility through GA. Additionally, the section is responsible for support of testing in the simulated environment for CME20 test and design maintenance activities.

The Test Bed Integration group is responsible for the assembly, documentation and delivery of target machine and emulator testbeds for Product Area Switching (PAX) and AXE Mobile Core (AMC) development projects between start of function test execution (MS7) and General Availability (GA) of the CME20 Switching System Product Line. TCM test is integral to these projects to ensure reference and working dumps are available for projects under test with the correct software configuration.

● The tasks will center on assembling reference dumps and function change of working dumps for CME20 test projects. Loading and documentation of CM's during INDUS and type acceptance phases is required, and CME20 operations and maintenance tasks are included in the duties related to support of the local test plant at EED. Trouble shooting of faults detected during dump assembly or function change is often necessary.

We are looking for someone with AXE testing experience. You should have the ability to work well on a highly motivated team and to work well under strict time pressure.

Contact/Application not later than 970930: Human Resources Doerte Kaulard +49 2407 575 163 Memo: eed.eeddka or Group Manager Stefan Poesch +49 2407 575 347 Memo: eed.eedstp

The system group within XIP PAX design department at Ericsson Eurolab Deutschland GmbH has the product responsibility for the mobile application 11APT 210 25 and the subsystem MSS within the CME20 / CMS40 switching system. We also run the product committees for these products, PC-11APT and MSS, and perform system studies. For further support of our system group we are looking for a

SYSTEM DESIGNER

● As a System Designer your main tasks include: Participation in prestudy, feasibility- and quickstudies. System level 1 design. Standardization, change request analysis, statement of compliant tasks. Market support. Writing of technical reports.

As a suitable candidate you are an Ericsson employee with at least three years of design experience preferably in the area of switching systems. Furthermore you should be familiar with 11APT mobile applications. Good knowledge of mobile telephone systems and in Data communications is a clear advantage.

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

Contact/Application not later than 970930: Human Resources Doerte Kaulard +49 2407 575 163 Memo: eed.eeddka or Systems Group EED/X/PEC Frank Plettenberg +49 2407 575 253 Memo: eed.edfrp

Ericsson System Expertise Ltd, Ireland

SECTION MANAGER POSITIONS

As part of the Cellular Systems Design Divisions (EEI/R) continuing organisational development and progression, we invite applications for the positions of Section Manager in our RMOG, RMOA and RMOJ Development departments.

● These positions will be of critical importance in aiding EEI/R to implement its strategies and meeting the challenging goals and objectives set out for the division.

Key responsibilities for the position of Section Manager are: Management of the competence and career development of staff. Resource planning, allocation and task assignment. Provide coaching and guidance to staff.

Active participation in the management of the assigned Departments in respect of: Strategy and goal realisation. Manpower planning and recruitment. Continuous improvement programmes. Budget and cost control. Change management.

Successful candidates will be expected to contribute in a technical capacity with regard to identifying long term competence needs; the development of the department and providing active quality assurance and coaching of staff.

Candidates will be qualified at degree level and/or will have acquired sufficient technical and business expertise to be able to function independently at a professional level on all activities. Candidates must also demonstrate a genuine interest in people. be considered, both now and in the future, please forward your

Application not later than 970912: Anne Marie O'Sullivan

Ericsson Inc., USA, EUS/R, Eastern Region

ACCOUNT MANAGER - GSM SPECIALIST (WEST POINT, GA) USA

● Individual will support a PCS operator's management team with business development and strategic marketing. Identify, evaluate and capture new market segment opportunities in residential and business markets. Increase operator's subscribers and market share in existing market segment through deployment of new Value Added PCS Services. Support operator's regional sales teams in capturing these new opportunities through unique value propositions.

Bachelor's Degree in technical field or equivalent required, MBA preferred. 3-5 years of GSM strategic marketing experience preferably from a competitive European market.

Experience in marketing of value added subscriber services such as: data, private networks, wireless local loop, short message services, paging, pre paid SIM applications, etc. Individual should also have 5 years OEM direct selling experience. Knowledge of the OEM industrial or telecom market. Required skills: demonstrated selling, written and verbal communication and interpersonal skills. Must be organized, able to balance many different tasks, able to prioritize, self motivated, goal oriented, and a team player.

Contact: Anders Olin, Sales Manager, EUS.EUSAOL, or Tammi Terry, Human Resources - Reston, VA) EUS.EUSTERR or call +1(703) 397-9011, FAX: +1(703) 437-7959.

Ericsson Telecomunicazioni S.p.A. - 970904-

SYSTEM TESTERS, PRODUCT UNIT RESIDENTIAL SERVICES

TEI has been assigned the responsibility for creating the Product Unit Residential Services within the New Switching Program in BU Public Networks. The new organisation will include a System Verification Unit, covering the area of PSTN and ISDN Services.

● We are looking for System Testers that can provide significant competence to the new System Verification Unit of the Product Unit Residential Services.

The role of System Tester will include activities such as: System Test Preparation. System Integration Test. Early System Test. System Test. Successful candidates will have the following characteristics: 1-3 years of System Test /

Trouble Shooting experience on AXE 105 or AXE 106 system, good knowledge in preparing / using BAT files, good knowledge of System Verification tools (e.g. traffic generators, operator command generators, etc.), good knowledge of the Level Test methodology, testing experience in the area of ISDN or PSTN Services will be appreciated, good written and spoken English.

The candidates must be ready to work in a young and dynamic team environment.
Location : TEI Rome, Italy

TROUBLE SHOOTERS PRODUCT UNIT RESIDENTIAL SERVICES

TEI has been assigned the responsibility for creating the Product Unit Residential Services within the New Switching Program in BU Public Networks. The new organisation will include a System Verification Unit, covering the area of PSTN and ISDN Services.

● We are looking for System Testers that can provide significant competence to the new System Verification Unit of the Product Unit Residential Services.

The role of Trouble Shooter is to give support to System Testers during the whole System Verification process.

Successful candidates will have the following characteristics: 1-3 years of Trouble Shooting experience on AXE 105 and/or 106 system, testing experience in the area of ISDN or PSTN Services will be appreciated, good written and spoken English.

The candidates must be ready to work in a young and dynamic team environment.
Location : TEI Rome, Italy

Contact: Maurizio Palaia, Memoid : EITA.TEIMZP or Donatella Nicoletto, Memoid : EITA.TEIDONI

Ericsson Communications Ltd, New Zealand

The Local Network Systems Business Unit of Ericsson Communications Limited New Zealand is based in the sunny port city of Napier, on the east coast of the North Island. The Business Unit is widely respected for its dedication to research and development, design innovation and excellence.

The following opportunities have arisen in our R&D facility. As part of a dynamic project team, these positions offer applicants the chance to contribute to innovative new products and leading edge technologies in a challenging, rapid growth industry.

DATA ENGINEER

● As a core design team member in access network technology, innovation and skill development are key strengths for this position.

The successful applicant will be familiar with: UNIX Systems. SNMP & Network Management Protocols. Software C/C++. Security and authentication protocols (RADIUS/TACACS). Data protocols such as V34, X21, V110, TCP/IP. Telecoms infrastructure and ISP practices.

DATA TECHNICIAN

● This role requires a team player to provide technical support to design, test and installation/commissioning teams. A willingness to learn and increase skill levels is essential. Training in leading edge technologies and network access methods will be provided.

The successful applicant will be familiar with: TCP/IP, IPX/SPX, G.703, V.34, X21, V.35 protocols. Product development. Product installation & testing. Technical writing. Customer support & service issues.

Some local and international travel may be required.

COMPONENT ENGINEER

● This position involves testing and approving components for new and existing manufactured products.

The successful applicant will be familiar with: In-circuit component test. PCB design & production processes. Analysis for application. Component specifications, applications and tolerances. Component databooks.

Application not later than 970917: James McAllister, Development Manager, memoid: ENZ.ENZIMCA, phone: +64 6 831 0200, fax: +64 6 8310225, Ericsson Communications Ltd, PO Box 1046, Napier, NEW ZEALAND.

Ericsson GmbH, Dusseldorf, Germany (EDD)

GSM SENIOR SUPPORT ENGINEER / SUPPORT SPECIALIST

● We are looking for three support engineers with a minimum of 3 years AXE/GSM experi-

ence, specialised in either the BSS or the SS area. The successful candidates will be working with a young team in the unit 'Customer Service Center - MMO'.

The unit is responsible for the support activities to our customer, Mannesmann. This involves TR analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development.

The unit is also responsible for the acceptance test with the customer, FOA implementations and the roll-out of new releases.

Mannesmann is a demanding customer with one of the biggest GSM network in the world. They have been the world FOA for many new releases and for this reason, we have a very close contact to the development projects with Ericsson. This will give the successful candidate a great opportunity for personal and technical development and work with the latest GSM technique.

You should have a good knowledge of support activities. You will play an active role in providing support and advice to the local engineers and build up the local competence.

The position can be either expatriate or local employment.

Contact: Mikael Strandberg for the job in the SS area, phone +49 211 5342359, memo id EDD.EDDMIST and Jens Albers for the BSS vacancy, phone +49 211 5342363, memo id EDD.EDDJALB.

LM Ericsson International AB (TKV), Vietnam

BSC SUPPORT ENGINEER

● WE are looking for a BSC Support Engineer for a long term contract(1 year) in Vietnam. You have a good knowledge of support activities, providing emergency and day to day support to the customers, by answering their queries, providing solutions and visiting sites.

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

You have 3-5 years of AXE experience, good knowledge of GSM system and trouble shooting skills.

Contact: Ray Quinn, Phone +84 8 8325601, memoid TKV.TKVRAY or Sören Lindström, Phone +46 8 757 5519, memoid ERAC.ERASLM Application: KI/ERA/LY/RA Ritu Malik, Phone +46 8 4046786, memoid erac.erarima

Ericsson Telecom AB Public Network Customer Services Telecom Consulting

Customer Services is a Global Unit within Public Networks that is experiencing a rapid growth throughout the world.

To contribute to the challenging expansion, Telecom Consulting is looking for one, highly motivated and entrepreneurial

OPERATION & MAINTENANCE CONSULTANT

● O&M consulting works with professional services contracted for and provided to organizations by specially trained and qualified persons who assist the client organization to identify management and operational problems, recommend solutions and support the implementation of improvement plans.

You have at least 5 years of experience in the Operation & Maintenance and Network Management areas, and good over-all telecom knowledge. Good knowledge of measurement technology, as well as network synchronization experience, is a merit. You have probably a university degree. Good communication skills, good written and spoken English is a requirement. Other languages are a merit.

You will work in a global organization in team with other consultants and we want you to be customer oriented, open minded, goal oriented and self-motivated. Frequent travels and short term international assignments are also part of the job.

Contact: TB/ETX/PN/CSC Kicki Thornér, tfn 08/719 7238, ETXT.KICKI or TB/ETX/PN/CSC Gian Pietro Zampieri, tfn 08/719 0135, ETXT.ETXGISE

Ericsson Australia Pty. Ltd.

BE A PART OF EPA'S FASTEST GROWING BUSINESS THE REGIONAL CENTRE

TEST ENGINEERS / TEST LEADERS

We are looking for contractors and local staff. EPA's Software Support Centre is one of the fastest growing parts of the Regional Centre. The growth in demand has been phenomenal. Many people have been appointed, but we are still in need of experienced engineers.

You will be working in the Fixed network, caring out AS verification and providing software updates and some on site support to our operators locally and within the Asia Pacific

Region. You will have the opportunity to grow with our newly formed organisation.

● If you are currently a support engineer, maybe a designer or application system tester looking for a new challenge. We would like to speak to you.

Requirements : Good AXE knowledge or IN knowledge. Testing or Test Leading experience. Trouble shooting skills. On site experience. Strong customer focus. Cultural awareness (Ability to work with Asian cultures). Ability to travel regularly. Demonstrated track record as a team player.

Contact/Application not later than 970912: Joanne Valastro (EPA.EPAJEV).

Ericsson Ltd, UK

ACCOUNT DEVELOPMENT MANAGER

Dept. Finance and Professional Services, Marketing and Consono Solutions. Site UK.

● The Account Development Manager reports to the Sales Manager in Finance and Professional Services and Marketing and Consono Solutions and is responsible for meeting the sales targets identified at the beginning of each budget year. The position holds significant responsibility in that the individual is dealing with major accounts both enabling new business sales and/or ensuring that existing major customer needs are fully satisfied.

Customer interface: Management of customer accounts assigned by Sales Manager.

Key Responsibilities: Establish contact with allocated customers and demonstrate Business Networks capability to offer a solution, develop working relationship with key senior contacts at Board level. Work closely with other business sectors within ETL/Z to provide total solutions. Develop and manage longer term sales campaigns and partnerships with allocated major accounts. Take responsibility for the Bid management ensuring that the customer requirements are fully met within the timescales agreed. Sell Business Networks solutions, set price, negotiate with customer to ensure that profit margins are maintained within the perspective of winning long term business. Chair customer meetings, ensuring any technical support is present and briefed regarding the specific customer issues. Carry out corporate/ product presentations to allocated customers. Demonstrate understanding of the dynamics of the vertical markets as allocated. This would include market trends, industry issues and key political forces. Provide monthly business reports indicating forecast information and prospect updates to sales management. Identify and report threats/opportunities via appropriate channels. Hold budget responsibility as agreed with management for turnover and associated profit streams. Actively contribute to the continuous improvement process and the ongoing development of a quality culture by identifying and implementing improvements to processes and activities and encouraging others to do the same.

Qualifications/Skills/Experience: Essential: Successful sales track record in IT/Telecommunications. Experience of presenting to customers verbally and in writing. Minimum of three years sales experience in a major switch environment.

Desirable: Degree standard. Sector/Industry experience. IT literacy and experience in using business software. Experience in selling into blue chip organisations or major Public Sector bodies.

Contact: Mary-Anne Morgan-DeGray. Phone 01444 256261, e-mail etl.etlmemn@memo.ericsson.se. Ericsson Communications PVT. Ltd.

SYSTEM SUPPORT EXPERTS

India today, is one of the most challenging telecommunications market in Asia and as a result we have excellent opportunities in System Support to secure and deliver support services to customers in India. With rapid expansion of GSM networks in India and introduction of basic services in different circles, we urgently require people with following profile to support CME20 and transgate (FMP and BM) application systems.

All positions will be initially for a period of one year.

SYSTEM EXPERTS

● As a system expert, you will have many different interfaces such as customers, other Ericsson Support Offices and all staff in the System Support department.

Responsibilities : As a system expert, you will interface with all technical issues related to CME 20 and/or FMP and BM product lines. As part of delivery of support services, i.e Trouble Report Handling and Analysis, Software

Updates, Help Desk and Consultation , Emergency Support, System Experts will provide a high level of competence in trouble shooting in both hardware and software. As part of the System Expert group, they will assist and transfer technical competence to other members in System Support.

As part of our continuous support improvement process in order to achieve customer satisfaction and quality in all deliverables, System experts will play a major role in improving support processes and will participate in technical discussions, disturbance investigation and feasibility studies.

Qualifications and Experience: Candidates must have 5-7 years AXE work experience where at least a minimum of four years have been spent working in a support environment either in CME 20 SS/BSS or FMP/BM product lines.

It is essential that candidates demonstrate good analytical, organisational and communication skills, both written and verbal. Candidates will possess a good strong background in switching, traffic concepts, telecommunication networks, inter-exchange signalling, product functional descends and high level trouble shooting competence in PLEX and ASA.

Ability to work in a team environment is vital as System Experts will play a leading role in transfer of technical competence to other members in the System Support team. System Experts will be part of the Emergency Support team and candidates must be able to demonstrate the ability to work in structured manner.

Contact: Nalin Taylor Memo id ECI.ECINALT Mobile : +91 9810049912 or Bo Hedemalm Memo Id ECI.ECIBHM Mobile : +91 9810049960 Application: Nalin Taylor, Ericsson Communications Pvt Ltd E-28/B-1 Extension Mohan Co-Op. Indl Estate Mathura Road, Badarpur New Delhi- 110 044 India

Ericsson Inc. USA

GSM RBS SENIOR CUSTOMER SUPPORT ENGINEER

● Is your area RBS2000 and are you looking for work in a fast expanding market?

The CMS40 TAC (ESO) in Dallas, Texas (USA) is the central support organization for GSM1900 MHz systems in the North and South American markets. We support the RTAC's (FSC's) with second line support in trouble shooting, technical support and procedures. We are responsible for SW deliveries and CMS40 FOA's. We now need to strengthen our organization with another support engineer.

We need someone with good experience in the BSS system with focus on the RBS2000 product. Experience in the RBS2000 HW and SW trouble shooting and fault identification procedures is necessary.

We work in an international environment, close to the customer, where good communication and interpersonal skills are important. You must be a self-starter and cooperative team player.

Contact: Ulf Broberg CMS40 TAC Manager +1 972 583 0788, EUS.EUSULFB or Ulf Lonn +1 972 583 0995, EUS.EUSULLO

GSM BSS SENIOR CUSTOMER SUPPORT ENGINEER

● Is your area BSS and are you looking for work in a fast expanding market?

The CMS40 TAC (ESO) in Dallas, Texas (USA) is the central support organization for GSM1900 MHz systems in the North and South American markets. We support the RTAC's (FSC's) with second line support in trouble shooting, technical support and procedures. We are responsible for SW deliveries and CMS40 FOA's. We now need to strengthen our organization with another support engineer.

We need someone with good experience in the GSM/BSS system. You should have 2+ years of in-depth SW trouble shooting experience in the CMS40/CME20 BSC. Knowledge of the GSM system is also necessary.

We work in an international environment, close to the customer, where good communication and interpersonal skills are important. You must be a self-starter and cooperative team player.

Contact: Ulf Broberg CMS40 TAC Manager +1 972 583 0788, EUS.EUSULFB or Ulf Lonn +1 972 583 0995, EUS.EUSULLO

Ericsson Radio Systems AB, Kista

MANAGER TELECOM MANAGEMENT SOLUTIONS (TMS) BRAZIL AND MALAYSIA.

The Business Unit for Telecom Management Solutions, RTMS, is spreading its wings. We will establish regional TMS organisations at 4 loca-

tions worldwide starting with Sao Paulo, Brazil and Kuala Lumpur Malaysia. We are looking for managers who will build-up these organisations and make them successful.

● This local TMS organisation will be responsible for the Marketing Support as well as the Supply of our Services and Products regarding Network Operation & Maintenance, Network Management Services i.e. MMIS, Business Operation Support Services i.e. Billing, Fraud, Customer Care and Business Development Services.

The local TMS manager will report directly to ERA/NC as well as the MLC management. The Manager will be responsible for: Organisational Development. Development of the TMS Business in the region.

Requirements for the candidate: At least 10 years working experience from one or more of the following areas: Mobile Telecom Operator environment (management position). Business Operations within Mobile Telephony Systems. Customer Services. Operation/Development of Mobile systems. The candidate should also have the following qualifications: Excellent proven managerial skills. Excellent Language skills, English and in the case of Brazil, Portuguese and/or Spanish. Excellent negotiation skills. Proven social capability. Adaptability to foreign cultures and working environments. Master of Science degree in e.g. Electrical Engineering, Economics or Business Administration.

Contact: ERA/NC Bo Carlgren, phone +46 8 757 1260, memoid ERA.ERABOCA or ERA/NRC Bernhard Nijenhuis, phone +46 8 404 4702, memoid ERAC.ERAHUIS. Application: Ericsson Radio Systems AB. ERA/NH Mirjam Skillner, 164 80 Stockholm.

Ericsson Australia Pty. Ltd.

S/W ENGINEERING VACANCIES IN MELBOURNE, AUSTRALIA (EPA)

Ericsson Australia (EPA) is searching for highly experienced and high potential AXE software engineers to work in the Fixed Network - IS-DN/PSTN Unit, based in Melbourne.

The Fixed Network Unit (DIX) comprising 135 people, is responsible for the development, design and test of AXE software for the local market and standard Ericsson market.

The System Engineering team and Fast Track team within DIX are two specific teams that require additional resources in the short and long term.

System Engineering provides technical expertise for tender analysis, prestudies and investigations, and covers network characteristics issues at the front end of the development cycle. Fast Track provides turnkey solutions to new requirements to complement the deliveries from major projects.

● Prerequisites: Fluent in PLEX programming. Excellent AXE Systems knowledge. Exposure to all phases of application system package development. Excellent English verbal and written skills. Works well under pressure situations. The ability to work in a team environment. The ability to transfer knowledge to less experienced engineers.

Experience in or potential for leadership roles will be highly regarded, as will experience in system engineering activities.

Ideally applicants will possess an engineering or computer science tertiary qualification, but equivalent experience will be well regarded.

Preference and assistance will be given to candidates willing to move to Australia and work at EPA on local conditions. Depending on each individual's expertise, we may consider the option of a long term contract.

Application not later than 970910: Margot Terrell-Jenkins via MEMOID EPA.EPAMJT, clearly stating if you are interested in local employment. Your written application should include details on your education level, training courses undertaken, employment history, a statement on why you are suited to these positions, and a statement on your career goal.

Ericsson Taiwan Ltd

FSO DEPARTMENT MANAGER

● We are looking for a FSO department manager to manage the Field Support Department in supporting and maintaining customer's GSM/DCS Network in Southern Taiwan.

Responsibility: To manage the FSO Department in customer technical support and to represent account and customer in participating EPA's regional support meeting and ERT/FSC's Support Meetings.

To recruit, train and build up competence of the customer support team.

To support customer's O&M and trouble shooting in manager level on the following areas: AXE switching network, radio network,

transmission network and Unix based system network in GSM/DCS system.

Job Requirement: You need to have at least 5 years of experiences in modern cellular switching network in R/D, field applications, testing and installation related areas. Min. 2 years of experience in managerial position in a technical unit is essential. You also need to be a team player with customer service oriented attitude. Good Command of English is a Must. In addition, ability to communicate in Mandarin will be a plus.

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

Ericsson GmbH, Dusseldorf, Germany

OPERATIONS PROJECT CONTROLLER MMO

● tasks: Communication to overall project managers / breakdown to sub-projects / specification of interfaces to other departments / time scheduling / cost evaluation / allocation / estimates / status reporting internally and to customer

education: technical education or Dipl.Ing. / 5 years experience in operations / good knowledge in English language / experience in material handling / team-orientated / working independently
start: 01.10.1997

Contact: Michael Dittrich (Memo-id. EDD.ED-DMD) or Human Resources Departement, Heike Ganz (Memo-id. EDD.EDDEGA)

OPERATIONS SUPPORT ENGINEER MMO

● tasks: Perform and be responsible for the introduction of new products / product upgrades / develop, create, maintain and improve installation and testing methods, routines and tools to create corresponding documentation / develop and create Field Acceptance procedures / working independently

education: technical education or equivalent / 3 years experience / good knowledge in English language / team-orientated
start: 01.10.1997

Contact: Michael Dittrich (Memo-id. EDD.ED-DMD) or Human Resources Departement, Heike Ganz (Memo-id. EDD.EDDEGA)

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

MANAGER CUSTOMER SERVICES - MOBILE NETWORKS

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

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

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

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

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

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

Ericsson Sp.zo.o Poland

HEAD OFFICE TRANSMISSION MANAGER

● We are looking for a Transmission Manager at Ericsson Head Office for the GSM project in Poland.

This opportunity provides for the right candidate the freedom to develop their role and responsibilities, to enjoy the satisfaction of estab-

lishing work practices and Transmission strategies for Ericsson in a demanding project.

The role requires the Manager to continue developing a close working relationship with the customer and staff at the Warsaw and Gdansk regional offices.

The successful candidate will have at least 3-5 years experience in Microwave transmission planning in a GSM project, with experience in managing a large engineering department.

The applicant will be self motivated, have a flexible approach to work, have excellent communication skills, proven time management skills, and able to demonstrate an ability to work under pressure from a demanding project.

Preference will be given to applicants with a post graduate qualification in Management, and familiar with Ericsson transmission products Minilink, RAPS and DXX.

Contact: Hans Jonsson, Operations Director, +48-22 608 97 08 or Cliff Everingham, Head Office Transmission Manager, +48-22-608 97 21. Application: Ericsson Sp. Zo.o. EPO/PH Helena Sollenberg, ul. 17 Stycznia 32, 02-148 WARSAW. Memoid EPO.EPOHESO or fax +48-22-608 97 99.

Ericsson Radio System AB, Kista

MANAGER OF CMS 8800 INTEGRATION CENTRE

The centre is being established to enable successful integration of products to our systems due to the increasing complexity of the Networks which use CMS8800.

● We are therefore, currently seeking a manager for our new CMS 8800 Integration Centre which will be based in North America.

The position will be responsible for between 10 to 20 persons and as part of the Management team be responsible for: budget, resources plan and staffing, salary, competencies, quality and processes. This position will report to a management team in ERA/AM/O.

From the business side interaction towards internal and external customers as well: Sales, Marketing, forecasting, product portfolio preparation and market analyse. There will be some international travel. The successful candidate should have: Documented Management experience in either Product Development, Design or Support Business areas. It should be for at least 5 years and 3 in a senior management position.

The individual should have proven record of initiating change and improvements. A willingness to contribute, to the design of the integration centre and the implementation of innovative organizational solutions in this new business environment.

Requirements for the position: At least ten years working experience in the Telecom industry. At least half of the time should be in the Cellular area. Excellent management / leadership skills. Communications skills both written and oral. Professional in English speaking and writing. Good negotiation skills. A university degree or equivalent work experience.

Contact: James R Kirst +46 8 4048325 Memoid ERA.ERAJAKI Application: Ericsson Radio Systems AB, AH/H Marianne Molin, 164 80 Stockholm

Ericsson Eurolab Deutschland GmbH, our young research & development centre in Herzogenrath, near Aachen has the following vacancy.

Within our PAX System House, in the System Test & Support department we have an open vacancy as

SECTION MANAGER, "CME20 SS MAINTENANCE AND CUSTOMER SUPPORT"

● The main responsibilities of the section are: coordinate, perform and follow up testing of corrections on CME20 SS products. test, document and deliver monthly correction load files to CME 20 SS Support organisations. run the CME20 SS Help Desk. develop, test and maintain the implementation procedures for SS node upgrades. test and deliver of CME20 SS upgrade packages (CN-P) whenever required.

The primary objective is to guarantee that the section meets their customer expectations, the agreed goals and the needs of the company.

The section manager motivates and stimulates his/her staff in the personnel development. The section manager reports directly to EED/X/SC, Department Manager Test & Support Department.

As a suitable candidate, you have a good knowledge of Product Line Maintenance processes and activities.

You are familiar with processes and activities of our supplier (Design Maintenance, Industrialization projects), customer (Support

and partners. You should be initiative, cooperative, stress-resistant and able to communicate your ideas and solutions effect.

You have gained first experiences in a leadership position, have strong interest in people and show good communication and coordination skills. Furthermore, you should be able to motivate and be willing to continue to develop as a leader.

The department and Human Resources will give you support for your individual development and all needed training.

Contact not later than 970915: Human Resources, Doerte Kaulard, Memo:EED.EEDDKA, Dial:+49 2407-575-163 Jan-Peter Meyer-Kahlen, Memo:EED.EEDJPM, Dial:+49 2407-575-315

Ericsson Sp.zo.o Poland

HEAD OFFICE CELL PLANNING MANAGER

● We are looking for a Cell planning Manager at Ericsson Head Office for the GSM project in Poland.

This opportunity provides for the right candidate the freedom to develop their role and responsibilities, to enjoy the satisfaction of establishing work practices and Cell planning strategies for Ericsson in a demanding project.

You will be responsible for the regional offices in Warsaw and Gdansk Region. Your responsibilities involve support to the staff, co-ordination of resources and responsibility for personnel and all strategic planning. You will also continue to develop a close working relationship with the customer.

To be successful you should have at least 3-5 years experience from cell planning and also experience from management of an engineering department.

The applicant should have excellent communication and time management skills and ability to work under pressure.

Contact: Hans Jonsson, Operations Director, +48-22 608 97 08 or Ivan Djacovic, Head Office Cell planning Manager, +48-22-608 97 36. Application: Ericsson Sp. Zo.o. EPO/PH Helena Sollenberg, ul. 17 Stycznia 32, 02-148 WARSAW. Memoid EPO.EPOHESO or fax +48-22-608 97 99.

Ericsson Eurolab Deutschland GmbH, our young Research & Development Centre in Herzogenrath, near Aachen, Germany has the following vacancies:

The EED/XIP department is part of the PAX system house and a typical design centre within the GSM development area of the Ericsson family. The GSM development is targeted towards the European and American systems with close coordination to a number of design centres worldwide.

Our design groups are responsible for developing our products according to RMOG's methodology, enhancing them by locally developed processes. The PAX design department in EED is looking for a

FUNCTION TEST LEADER CME 20 SS R8 MSS

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

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

The main authorities and tasks are: Take part in the establishment of the function test team. Plan, control and report FT activities of the subproject. Initiation of reviews and technical approval of the FT TSs and TIs. Selection of test environment (simulated or target).

Performance of entry and exit criteria checks. Be contact person for technical questions within the FT area.

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

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

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

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

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

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

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

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

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

Contact: Human Resources Dirte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or Section Manager EED/X/SOC Charles D. Grinstead, EED.EEDCGR, Dial: +49 2407 575 341

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

EXPERIENCED FIREFIGHTERS, TROUBLESHOOTERS, SUPPORT ENGINEERS & TESTERS ON LOCAL/SHORT/LONG TERM CONTRACTS

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

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

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

We work closely with Design organizations to fix faults and test and implement new functions.

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

Applicants should be educated to degree level or equivalent and should demonstrate a solid AXE background and a determination to tackle problems and meet new challenges. An open minded and flexible attitude and the ability to work well in a team environment are important personal qualities.

As a support engineer you should also show good written and verbal communications skills.

Contact: Human Resources Dirte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or

Section Manager EED/X/SLC Peter Lopez Memo: EED.EEDPELO, Dial +49 2407 575 201

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

PROCESS ENGINEER

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

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

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

Contact: Human Resources Dirte Kaulard, Memo: EED.EEDDKA, Dial +49 2407 575 163 or Methods and Quality Management AMC Andreas Bleeke Memo: EED.EEDANB, Dial +49 2407 575 394

Ericsson Inc, US

CMS40 STANDARDIZATION ENGINEER

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

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

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

CMS40 SYSTEMS ENGINEER

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

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

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

INTELLIGENCE NETWORKING (IN) SERVICE DESIGNER

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

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

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

Datacom Networks & IP Services

Business Line IP Networking and Routers

People are talking about tomorrow's Internet infrastructure
— we create it !

Ericsson Datacom Networks & IP Services is a business unit within Ericsson Infocom, which targets solutions and products for the IP infrastructure as well as IP services. The current internet activities are in: Remote Networking area — Access Router for wireless and copper based networks, IP Services — Public Intranet, Backbone Router — Giga Router, IP on ATM — Label Switch Router. The working procedures within Datacom are to follow the "small company approach", with small teams working with product marketing and development.

Access Router and Remote Networking

The access router and remote networking program is currently looking for ambitious people who is searching for new opportunities in a newly created organisation. We are highly motivated individuals who working with development and marketing of a range of leading edge Internet access products. The remote access product portfolio will include Internet access solutions for different access networks, such as ADSL, Radio in the local loop as well as remote networking products in a stand alone Point of Presence, for ISDN and analog modems.

You, will be dealing with state of the art and emerging Internet technologies and a new market with a number of business opportunities. We think you have experience and interest in one of the following main areas and are excited to work in a fast moving international Internet environment.

● **4 persons working with Software development and System design** — Development responsible of IP networking software such as, routing protocols, IP Security, Service classes in Internet, RSVP, Multicast. Design and development of IETF (Internet Engineering Task Force) standards and participate in the ongoing IETF work.

● **2 persons working with marketing Support & product management** — Responsible of pre-sales activities, customer presentations, create sales material, and product management activities of remote networking products. You should have experience with Internet Service Providers infrastructure and be able to identify new business opportunities together with customers.

● **2 persons working with management of remote networking products** — development of Web based and HP Openview based management applications for IP access networks. Identify and develop new IP access management services which help Internet Service Providers manage large IP networks.

● **2 technical project managers** — Management and work in small teams with product development of specific product releases. A technical project manager should have experience in IP networking, project management, as well as product development.

● **2 HW designers and development** — working with the design of the first and next generation access routers and remote networking products. The HW designers will be responsible for the router architecture in terms of processor, line cards, bus architecture, software drivers, operating system.

You will work with a high level of responsibility within the Access Router and Remote Networking program with your own limitations regarding your career opportunities. Short term location in the UK or US may be necessary, as the Access Router program is partly located at Ericsson Intracom and the partner in US. Applications may be submitted to:

Magnus Lengdell (ETX.ETXMAGL)
ETX/KK/DN/BIR
Datacom Networks & IP Services
126 25 Stockholm
Tel: +46 8-68 12302, Email: Magnus.Lengdell@etx.ericsson.se

Padraig Moran, +46 8-6812127
etxraig@kk.ericsson.se
ETX.ETXRAIG

Human Resources DN/H:
Annette Averstad
08-46 8 7719 8332
ETX.ETXAVA

contact

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

The face behind the Ericsson voice

"Welcome to Ericsson. We will assist you in a moment." For the past year or so, we have heard Jeanette Lindqvist's voice representing Ericsson. she's the voice you hear in the switchboard messages when calling one of the 25,000 Ericsson employees working in the greater Stockholm area.

She has recorded a number of different telephone messages since she was contracted to be a voice exclusively for Ericsson.

Today she is somewhat of a voice logo-type for the company, at least in the Stockholm area.

Jeanette studies law and business administration by day and uses her voice job as an extra income.

I usually work as an "Ericsson voice" once or twice a month. The company may need an additional message or want



"Welcome to Ericsson..." Many of the thousands of daily callers to Ericsson in the greater Stockholm area hear Jeanette Lindqvist inform them that they will soon receive assistance if the switchboard operators are unable to handle their call at once. Jeanette has an exclusive contract with Ericsson to be the Ericsson telephone voice.

Photo: PATRIK LINDÉN

to make changes in an existing message.

She's been rather anonymous so far, even though many people apparently recognize her voice.

"I was on location in Kista recording some messages once, and several people actually came forward and wanted to meet me. It felt a bit strange," she relates.

For the most part, however, recordings usually take place at Voice Professional's studio. It is the only company in Sweden that specializes in voices for automatic telephone messaging systems. Other customers include the Swedish National Railway and Telia.

150 different voices

"It's surprising how few companies are concerned with the way they sound over the telephone," says Fia Hammarström, who runs Voice Professional.

She has more than 150 different voices in her Rolodex. Several of them are, like Jeanette, contracted by a company and cannot be a voice for any other.

Jeanette rarely ponders the fact that thousands of people hear her in Swedish and English every day.



Fia Hammarström from Voice Professional (at right) checks intonation and ensures that sound quality is high when Ericsson's automatic telephone messages are recorded.

end line

Warning for voice mail

Do you have voice mail yet? Or are you still among the ranks of those who haven't yet gained access to this fantastic function in the corporate switchboard? The wonders of modern telecommunications are truly wonderful. That the person trying to reach you can leave a telephone message (which you will hopefully attempt to respond to) is a great service.

I am, however, a bit divided when it comes to my opinions on voice mail. Of course it's a good thing that people can leave messages. It is in many instances a time-saver to pick up messages off a cellular phone, which is the type of voice mail I use. But voice mail has its downsides, such as receiving unintentional messages.

Several times this summer, I was dragged into a seemingly tragic and serious lover's quarrel. An unknown female voice left messages saying how awful I (or the person she thought she was phoning) was and how my days were numbered so I should watch my back. It was both embarrassing and irritating. I tried to get my operator's help in tracing the caller, but they said it wasn't possible. I finally was advised to leave a personal message identifying myself, which worked - thank goodness!

But what to do with a text message to the wrong person? Like the time when someone named Bertil sent me the following message: "Buy two bottles of wine for a romantic evening." Fortunately he left his name so that my wife didn't think I was cheating on her!

My experiences should serve as a lesson to be extra certain before leaving messages. And to listen to your own messages in private just to be on the safe side.

However, there is one more reason why I'm not too keen on voice mail. When I'm stressed and looking for help, I can never seem to locate any live individuals. Just the other day, when our address database was on the fritz, I made the rounds through Ericsson Data's voice mail. After leaving messages in four different mail-boxes, I finally gave up. Support personnel should be very careful when switching their telephone to voice mail, in my opinion.

And one's spirits aren't lifted while waiting to be connected to an external number for several minutes, only to end up in the voice mail box!



LARS-GÖRAN HEDIN

PATRIK LINDÉN