

Photo: Lars Åström

## The important Y2K rehearsal went well

Ericsson used the night between September 8th and 9th as a major rehearsal for the millennium shift. It was a huge exercise involving most of those who will be working during the New Year. Ultimately, the critical date of the 9th caused no problems, but as a part of the exercise, several faults were simulated in order to prepare the staff. As a result, much useful knowledge was gained.

6-8



### Discerning aliens are to sell T28

Ericsson's major project to launch the new T28 phone model will commence shortly in 100 countries. The European campaign has a space theme, using humor and finesse to highlight the tiny phone's intelligence.

10-11

#### NEWS

### Property for sale

In a recent announcement, Ericsson declared its intention to sell all of its properties. The sales are being carried out in order to create more efficient handling of capital and provide greater freedom of action. Ericsson hopes that all the properties will be sold within 18 months.

4

### Faster launches

During the fourth quarter, the Consumer Products business segment will again be a money maker. Market share will be regained and Ericsson will become one of the two largest suppliers of mobile phones within 3-5 years.

3

### Global assignments

Many people dream of working abroad at some time. Ericsson is the world's second largest company regarding foreign contracts.

14-15

### The Internet is the answer

The Internet is the solution to an increasing number of questions. This is apparent in Contact's IT/IP supplement. Read about developments such as Jalda, Internet Advertiser and Ericsson's aggregation router.

Supplement

#### ERIC & SON

Contact's own series presents the reemergence of an old communications portal.

18



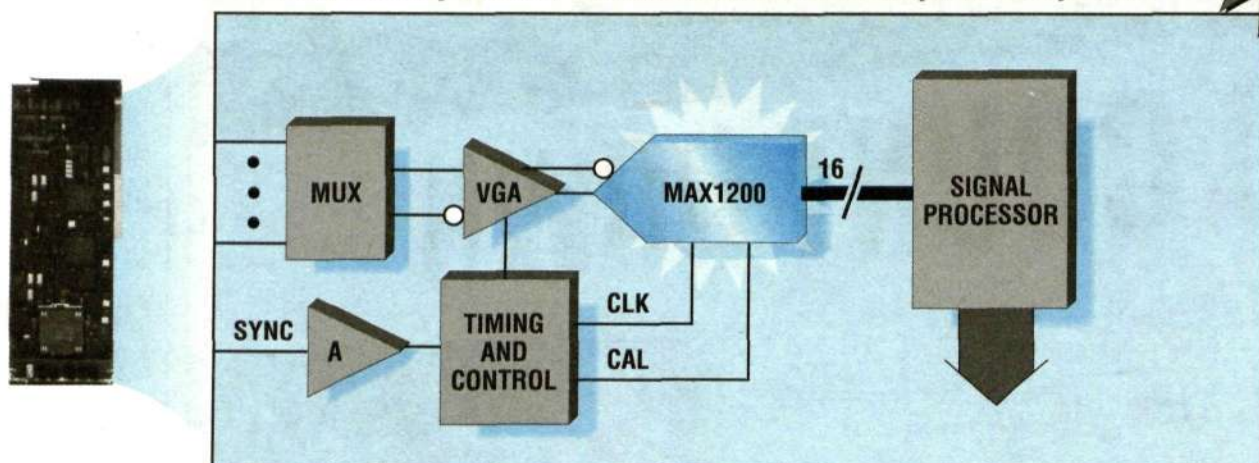
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# More and faster launches

By the fourth quarter of this year, the Consumer Products business segment will be making good money again.

By that time, the minor market share Ericsson lost during the first half year in this area will have been regained.

Jan Ahrenbring, Vice President Marketing and Communications, exudes calm and confidence. He states that the launch of the T28 is going completely according to plan.

"The phone has been received with great success. It's nice that we're getting so much attention."

By September, the telephone will be available in stores in over one hundred GSM countries. The launch kick-off occurred a couple of weeks ago, when the phone was released in Sweden. The T28 has been described as Ericsson's flagship among its new models, and it has been said that the company largely stands or falls with how the market receives it.

"That's perhaps an overly dramatic description of the situation. Certainly, it's an important product, but at the same time it is just one of many new models from Ericsson. The strong interest in the T28 has to do with its surprise introduction during a press conference to present the Annual Report in January. The telephone also utilizes a completely new technical platform."

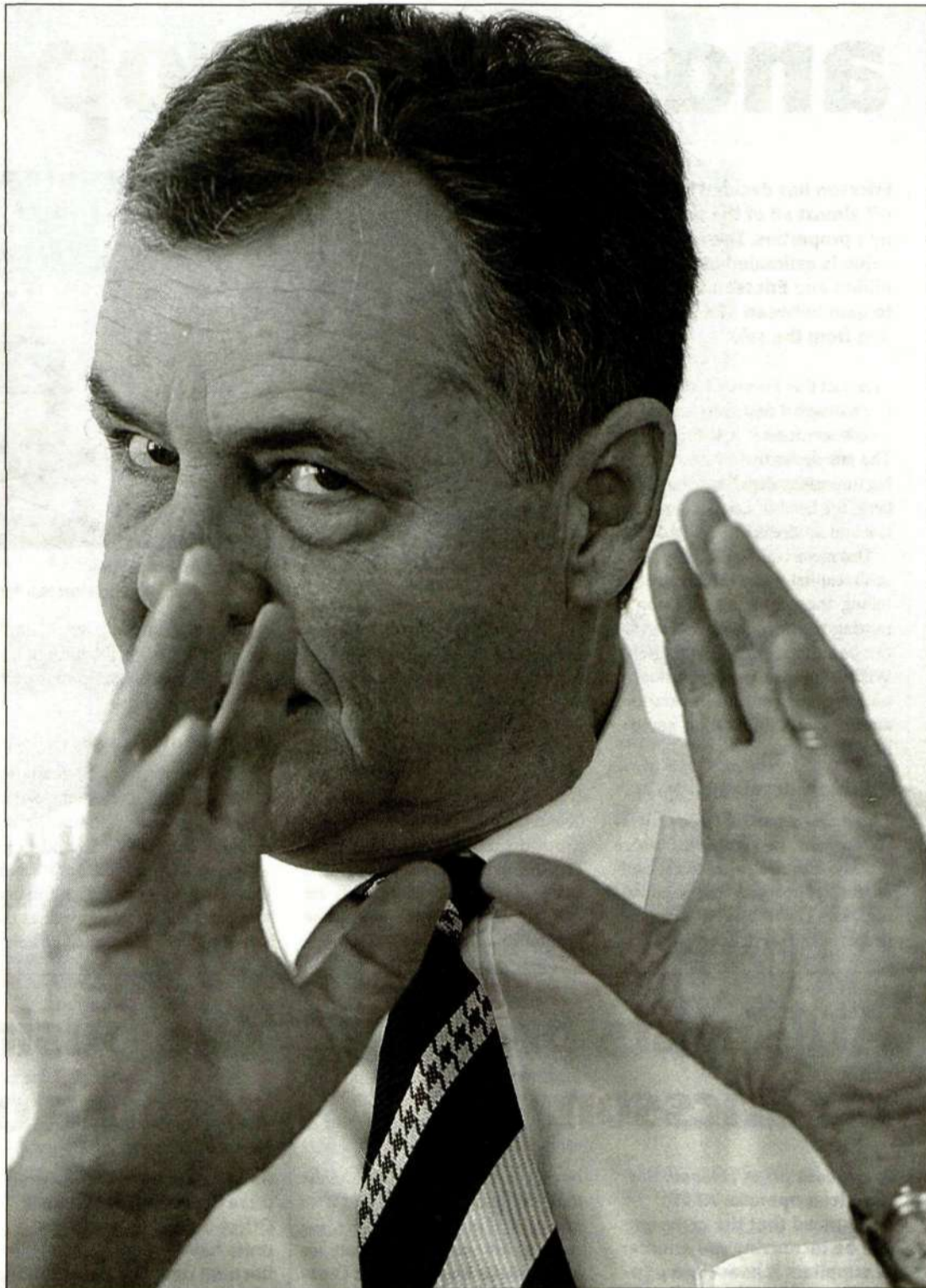
## Huge stock impossible

The successful launch has created great demand. Several stores in Sweden are already calling for more and bigger deliveries. The same thing happened when the T18 began selling a little while ago. But according to Jan Ahrenbring, they are counting on that.

"Remember, the telephone is being launched in over one hundred countries simultaneously and there are about 7,000 stores in each country. In order to supply all of these retailers with the volumes they want, we would have to manufacture and stockpile millions of phones. That's impossible since the costs would be prohibitive. Our competitors are in the same situation."

Instead, efforts are being made to speed up production by finding new production processes. With the T28, for example, several production units have been allowed to share responsibility for the industrialization phase. In the past, the entire responsibility rested with one unit. Now there are several operating simultaneously.

Over the long term – three to five years – Ericsson plans to be one of



Jan Ahrenbring promises to unveil another four phone models before the end of the year. Sales estimates for 1999 have been revised upward to between 240–260 million telephones sold worldwide.

two leading suppliers in the mobile phone area with 20 to 30 percent of the global market.

"We're in a very good position now and are counting on strong growth next year as well."

## 16 models so far this year

Current sales estimates for 1999 are between 240 and 260 million telephones sold worldwide; an increase from this spring when the estimates

were 220 to 250 million. So far during 1999, Ericsson has unveiled 16 new models. Jan Ahrenbring promises another four before year's end.

"We're going to be seeing faster and more frequent launches of new models in the future. The reorganization of the business segment this past spring was one aspect of the work to increase the pace and create new processes for developing new products. Development of new com-

ponents and product design should go hand in hand. In the past, those two tracks were perhaps a little too independent."

When it comes to design, some consider Nokia to have been more successful than Ericsson. During 1998, Nokia received a great deal of attention when it unveiled its new range of phone models. Up until then, Ericsson had placed more emphasis on technology.

"Of course, we have to admit that we should have placed a greater emphasis on design in the past. Ericsson has a great deal of expertise in that area, and in the future that will become even more apparent. To date, phone advances have mostly involved the products becoming smaller and being available in several colors. In the future, we'll see telephones fulfilling more specialized needs."

As the market grows and matures, customers are moving to the forefront and are having a greater influence on product development. Ericsson unveiled a whole new kind of telephone this spring with its R250. The phone is tailor-made for customers who need a durable phone for adventurous outdoor activities or who work in demanding environments. Ericsson is investing heavily in these kinds of customer-specific models.

## Ericsson more familiar

"Ericsson believes in being unique. This is true not simply of a telephone's function or appearance. It's also true for marketing messages and advertisements which are very important today."

Over a short period of time, Ericsson's brand name recognition has jumped up to seventh place on the list of the world's most recognized brand names, according to a study conducted last year.

"We're going to nurture and retain that position. Our employees have had a great deal to do with building up our brand name. It's all about creating a corporate culture and about how Ericsson treats its customers. A well-known brand name is invaluable."

## Bucking negative trend

Over the past year, the Consumer Products business segment has had to endure some negative criticism from analysts and the press. But with its latest products, that trend has been broken.

"The future looks very bright. We're an organization that has grown incredibly fast. Moreover, we have a work force with a very low average age. It can be difficult for many to understand the natural ups and downs of the business world. But there's absolutely no reason to be concerned."

Lena Widegren

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**Footnote:** Examples of what Jan Ahrenbring is talking about can be found on pages 10-13 in this issue, where Contact presents the new phone models in detail.

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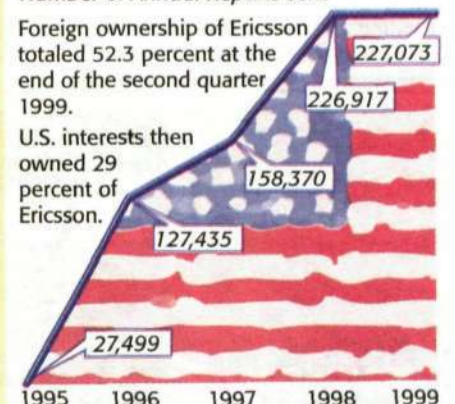
## DID YOU KNOW THAT...

### The U.S. owns more of Ericsson

#### Number of Annual Reports sent

Foreign ownership of Ericsson totaled 52.3 percent at the end of the second quarter 1999.

U.S. interests then owned 29 percent of Ericsson.





## IN BRIEF

## Major Brazilian CDMA contract

Ericsson has signed a contract with Mirror S.A., a Brazilian consortium, for the distribution of the largest Wireless Local Loop network (WLL) in Latin America. The contract, which pertains to wireless access equipment, is worth USD 200 million.

Ericsson will immediately begin installing equipment in the northern, eastern and northeastern regions of Brazil. The agreement includes installation of Ericsson's 1900 MHz radio base stations, the 1106 Compact, and the CMS 11 Base Station Controller.

The network will utilize cdmaOne technology. This is the first CDMA contract that Ericsson has signed since it acquired the CDMA division of the American telecom company Qualcomm last spring.

"The contract with Mirror S.A. is a significant step along the path towards realizing the spread of cdmaOne WLL. It provides new energy to Ericsson's long-term goals for cdmaOne technology," says Åke Persson, head of Ericsson's CDMA Systems business unit.



Kurt Hellström, Ericsson's CEO, in the Wall Street Journal, August 24.

## Kurt Hellström captured in action

"Ericsson's Hellström, a rebel with a cause," was the caption for a portrait of Ericsson's CEO, Kurt Hellström, in the European edition of the Wall Street Journal on August 24.

Several people, both inside and outside Ericsson, gave their opinions on Kurt Hellström. All of them considered Ericsson's new CEO, a farmer's son from northern Sweden, to be a manager who is also an entrepreneur, who makes daring decisions and lives by the creed, "the customer is king." It was also clear from the article that Kurt Hellström is a role model for several of Ericsson's managers.

One of his pastimes is to take a spin on his Harley-Davidson motorcycle, but there will likely be fewer opportunities for that in the future.

## Ericsson to sell off and rent properties

Ericsson has decided to sell off almost all of the company's properties. Their book value is estimated at SEK 7.7 billion and Ericsson expects to gain between SEK 9-10 billion from the sale.

"The fact that Ericsson is rationalizing its capital and focusing on its core operations is a strong signal. The sale shows that Ericsson is taking important steps," says Per Palmberg, the head of Ericsson's real estate and service company, REM.

This move is all about using Ericsson's capital more efficiently. By selling the properties, Ericsson is putting money into its coffers that can be utilized for something else. With the money, Ericsson can focus on developing its core operations and invest in interesting companies, for example.

## Quicker renovation

"But it also means that worn out facilities can be renovated more quickly. It can be easier to get capital for renovations and remodeling," says Ulf Nyberg, at Ericsson's property and service company.



Ericsson will be selling off more or less all of its properties.

Photo: Peter Nordahl

The properties will be sold over the next 18 months. As yet, no deal has been completed. Sales are starting in Sweden now and are expected to be completed by April 1.

The sale property involves almost all of the company's properties, including Ericsson's headquarters at Telefonplan in Stockholm and the much-discussed office building in London, which Ericsson acquired last year. In Sweden alone, there are over 30 properties and almost one million square meters. A few prop-

erties are exempted, for example the so-called Minifabben in Stockholm, where Ericsson Components manufactures chips.

## Inquiries of interest

"We've already received many inquiries from interested parties around the world. The properties in Stockholm, Mölndal and Lund will be very easy to sell, but it's clear that it will be more difficult in certain parts of Sweden as well as the rest of the world," says Ulf Nyberg.

## AT&amp;T puts pressure on Ericsson

In a recent press release, the American operator AT&T announced that the company will be increasing the number of suppliers it uses for equipment in its mobile telephone network.

In the past, Ericsson has been the largest supplier, but AT&T will now be purchasing equipment from Lucent and Nortel.

AT&T's network has been experiencing explosive growth over the past half year. One explanation is the new pricing system that the operator has implemented. Another is that the expansion of the digital cellular system has really taken off.

This past spring, Ericsson had a difficult time supplying equipment at the pace AT&T was demanding, pushing the company towards taking on other suppliers.

"The market in the U.S. continues to grow strongly and over the short term we will only be slightly limited

by change. What will happen over the long term is difficult to say, but if we take care of our responsibilities, the rapid growth could compensate for loss of market share," says Eric Österberg, PR manager at the Network Operators and Service Providers business segment. Up until now, AT&T has purchased half of its equipment from Ericsson, but in the future, deliveries will account for one third. Lucent has previously sold equipment to AT&T, while Nortel is a new supplier.

At TDMA Systems, they emphasize that their strategy of being a leading supplier to AT&T, remains strong, both within and outside the U.S., and the organization that is responsible for customer service for AT&T in the U.S., has been reinforced. Within the area of data services, the operator is leading and together with Ericsson is continuing close cooperation on 3G, the third-generation mobile phone system.

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## Two business units become one

As of September 1, the Enterprise Systems and Wireless Office Solutions business units have merged and become one. The current head of Enterprise Systems, Lars Svensson, now has responsibility for the new combined unit that will retain the name Enterprise Systems.

"The reason for joining the two units is to further simplify the organization by integrating technology platforms," says Haijo Pietersma, Executive Vice President and Manager, Enterprise Solutions business segment. "This way we will have greater joint resources."

"Through this measure, we'll profit from the integration of market offers and the use of the same channel for effective sales."

The three product units within the former Wireless Office Solutions business unit – Business Cordless Telephony (BCT), Mobility Server and Wireless LAN Systems

But even if Ericsson now sells off all its properties, it won't mean any changes for those working in the buildings. Ericsson will rent back the facilities from the companies that buy them. Even in the future there will still be a need for the service that REM provides, such as managing moves and different kinds of services.

"For the past several years, we've set up our job so that it doesn't make any difference who owns the properties. Rents and conditions are currently set at market levels, which is why the sale will not involve any major changes for our tenants."

Does this mean that one of our competitors could take over our facilities in the future; for example Ericsson's tower, which has strong symbolic value?

"The risk exists. That is why it is important that all of the buyers are stable and that we are in long-term agreement, so that Ericsson's values and branding will continue to be reflected in our premises," says Per Palmberg.

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– have been moved into Enterprise Systems unchanged. The twenty or so people in Wireless Office have been offered new positions within Enterprise Systems.

"The merger of the two units is going very well," says Lars Svensson.

In order to continue the important work within the wireless area, a Wireless Focus unit has been created with Johan Sandberg as its head.

A so-called implementation team has been formed with the task of quickly resolving all coordination issues. The team meets every morning and has been directed to resolve all questions within two weeks.

Wireless Office Solutions has, during the year, contributed several noteworthy launches. Among them are the new version of the Mobility server and new DECT systems as well as a number of new DECT telephones, of which a few are the result of a joint partnership with Ascom.

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Matthew Tapsell and Lotta Muth work on the news site.

Photo: Lars Åström

## Fast news on the Net

At Ericsson's new web site, Infocenter, one can find both daily news stories as well as searchable, previously published articles. The web site, which started up at the beginning of August, can be accessed both through Ericsson's internal and external home pages.

"In the near future, the web site will also have a message center which will present Ericsson's position on various issues," says Lars-Göran Hedin, corporate editor of Contact and the promoter of Infocenter.

The new web site has an advanced search function that can guide users through previously

published news and articles. Users can limit the number of hits by selecting a subject or product area or a specific search word. Along with every article, there are links to more information on the subject.

### Continuously updated

The web site is updated and expanded every day, with fresh news and previously published materials from Ericsson's various publications. Lotta Muth is the web editor for Infocenter, at the Information corporate function. She is working on developing the web site and publishing daily articles.

"I try to monitor various web sites within the company in order to collect news that should be posted

on Infocenter. I will gladly accept suggestions and ideas from readers in order to make the site as complete as possible," says Lotta Muth.

All material published on the web site is in English. In order to quickly disseminate information and maintain a high level of linguistic quality, Contact has appointed an English-speaking editor, Matthew Tapsell.

### Articles, photos and messages

The idea behind Infocenter is that it will be a natural source for those who are seeking information. It will be possible to access an article database, photo library, news service and message center, all from the same web site. In the future, the in-

formation should be easy to access using WAP (Wireless Application Protocol) technology. Lars-Göran Hedin explains:

"Take, for example, an Ericsson employee who is out traveling and needs to quickly find out what position Ericsson has taken on a certain issue. It will be possible for him or her to call up the Infocenter using their mobile phone."

"In order for Ericsson to continue to be successful, its intellectual capital needs to be accessible to all."

Ulrika Nybäck

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## IN BRIEF

### Continued aid to Turkey

► The effects of the catastrophe in Turkey are far from over following an earthquake three weeks ago.

In the last issue of Contact, we described the assistance being given by Ericsson, which included helping Turkcell get its mobile network operating again. That work has continued in conjunction with the major expansion of the network, which Turkcell ordered prior to the quake.

Ericsson is also joining forces with the Red Cross and the Red Crescent to help set up a tent village for 3,000 people in the town of Degirmendere.

The Swedish army has donated 500 tents to the affected families. Ericsson and volunteers are helping to move the equipment to Turkey and arrange water for the tent village, electricity, sanitation facilities and, of course, communications equipment. The need for temporary housing is great. Many buildings have been destroyed and several of the houses which are still standing are damaged and it is too risky to move back into them.

### GSM system to Morocco

► Medi Telecom, Morocco's second GSM operator, has chosen Ericsson as the main supplier for its GSM network. The deal is worth USD 142 million.

The GSM system will be delivered in January 2000. Once completed, it will provide national coverage.

Medi Telecom is jointly owned by a consortium whose largest shareholder is the Moroccan based BMCE Bank, Afriquia Group, Telecom Portugal and the Spanish company Telefónica.

"Medi Telecom's new network will favorably affect Morocco's economy. It will also create new work opportunities and technical development for the young people in the country," says Patrick Boyeaux, head of Ericsson in Morocco.

## Global helpdesk gives more time for work

A global helpdesk for questions regarding products or services has long been something Ericsson's local companies around the world have wanted. It finally became a reality on September 1, when the Commercial Solution Center in Stockholm opened.

Today, many employees in the market units spend as much as 40 percent of their worktime trying to find information, time which could instead be directed towards customer contacts.

"Via a web address, a telephone number and an e-mail address, we're going to try to answer questions relat-

ing to sales as quickly as possible, and within a maximum of three days," says Katarina Mellström, head of Commercial Solution Center. In addition to serving GSM Systems, it serves the entire Ericsson Services business unit when it comes to services.

An important task is improving the flow of information between local companies and product units. A database with answers to the most common questions is now being collected and will subsequently be updated on a regular basis.

"Here's our front desk and it is there that the questions come in," explains Katarina, showing us around in the rebuilt, former bank building,

a stone's throw away from Kista Center in Stockholm. "It's in the back office that all of the follow-up work takes place, along with analysis and processing of statistics. It is from here that the product units receive information which can subsequently lead to improvements."

The global help-desk, which also goes by a shorter name – ASQ (pronounced "ask") – will have approximately 25 employees with extensive



Katarina Mellström

knowledge. There are currently three people within the group who will be specially trained within their own areas, GPRS, GSM on the Net and UMTS.

In addition to answering questions, the personnel will update the database and maintain a skills network, which includes specialists from product units. Currently, this network consists of approximately 250 people. Cooperation with product units is important and, as the question database is built up, the product units will not need to do much of the work in answering recurring questions from local companies.

The Nordic countries, the Netherlands, the U.K., Spain and Italy were

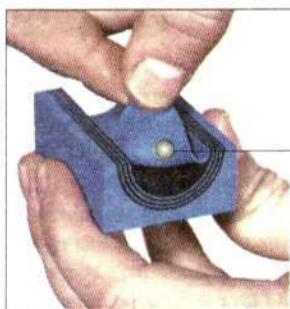
the first countries to receive access to ASQ on September 1. This autumn, other countries will be added and by January 2000, all market units should be able to turn to ASQ with their questions.

To begin with, the help desk is open during Swedish office hours, but during the autumn those hours will be extended and by the end of the year, ASQ will be open 24 hours a day, 365 days a year.

A global helpdesk can already be found in the Consumer Products and Enterprise Solutions business segments and also the Fixed Systems business unit.

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# Successful full-dress

**Ericsson's 24-hour millennium exercise was completed Thursday September 9th, at 13:00 noon, Central Eastern Time. During nearly 24 hours, 3,000 persons in 140 countries tested work methods and procedures in Ericsson's most extensive exercise of all time - a dress rehearsal for the millennium shift.**

"The exercise was successful, but there is still room for improvement," says Roland Sjöo, who is responsible for Ericsson's Y2K program.

The command centers for the exercise operated around the clock. No real faults in Ericsson's own systems or those supplied by Ericsson occurred as a result of the critical date September 9, 1999. However, a number of minor and major faults were simulated.

## Function well

"The dress rehearsal showed that our systems and routines function well," says Johan Wibergh, manager for customer support within the Network Operators business segment.

"Ericsson has never conducted an exercise on this scale before. Considering it was the first real test, everything went very well."

"One customer reported a real fault that was believed to be Y2K-related. It was not a Y2K-problem, as it turned out, but we treated it as one and handled the situation satisfactorily," notes Wibergh, who adds that Customer Support functioned very well.

"A word of praise is due the customer support organizations in Ericsson's local companies and product units. They did an excellent job," says Wibergh.

In several locations around the world, Ericsson has practised routines together with customers over the past 24 hours. The dress rehearsal focused on testing internal routines, systems and tools, not systems already installed with customers.

The exercise also revealed some weak points, however. Above all, this is a question of communication between various groups and the distribution of information, both internally and externally, as well as certain processes that must be trimmed.

## Positive information

"We must focus more on providing positive information, for example," says Roland Sjöo. "It took us too long to put out the word that everything was OK.

Being notified that nothing happened when the date first changed in New Zealand, was just as important as knowing if something had happened."

Roland Sjöo and his colleagues now have hundreds of improvement suggestions to consider following the dress rehearsal. The most important of these will be implemented before new, small-scale exercises are conducted during the autumn.

"We had already considered conducting additional exercises," reveals Sjöo. "The past 24 hours have made it even clearer that this is really necessary."

Although some work remains,

both Roland Sjöo and Johan Wibergh are convinced that the millennium shift will pass without major problems for Ericsson and its customers. At the New Year, 10,000 employees will be on hand during the millennium period to ensure that Ericsson is well prepared.

## Work pressure

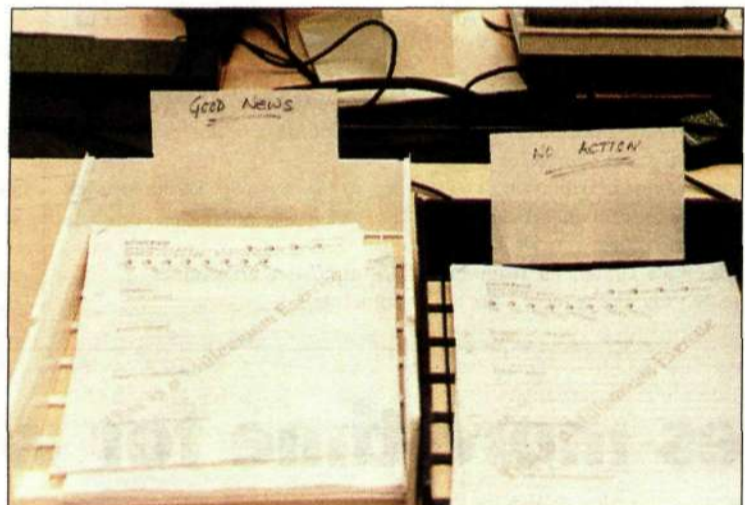
"There will be a great deal of work pressure on the support organiza-

Ericsson has never conducted an exercise on this scale before

tion during New Year. But we're also prepared for that. We will plan for the worst, but hope for the best," says Jorma Moberg, a member of the management team for the millennium program.

"We can feel secure as we approach the millennium shift. In the unlikely event that something does happen, we'll be ready for it," concludes Johan Wibergh and Roland Sjöo.

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Reports on the progress from all over the world came in to the Corporate Millennium center in Stockholm.

Photo: Lars Åström

# Realistic exercise was hectic

**A looming virus threatened one of Ericsson's global systems during the transition to September 9. This was one of the simulated scenarios in Ericsson's dress rehearsal for the millennium shift.**

In Stockholm, Ericsson's control centers were standing by to assist various customer groups and to coordinate the flow of information, both internally and externally. The communication between these centers was managed by methods which included videoconferencing and the premises were safeguarded by having their own electricity supply.

Via computer screens, phone calls and continuous monitoring of news channels to find out what was happening in the outside world, Eric-

sson started up its major millennium rehearsal.

The simulated scenario included both local power supply problems, crashed computer networks, threats of global viruses and worried customers. Outside the parameters of the exercise, a rumor was spread in a South American country that Ericsson's rehearsal was actually the "real" thing. There was no mistaking the realism of the exercise. Facial expressions and involvement revealed that the participants were taking all their tasks with the utmost seriousness.

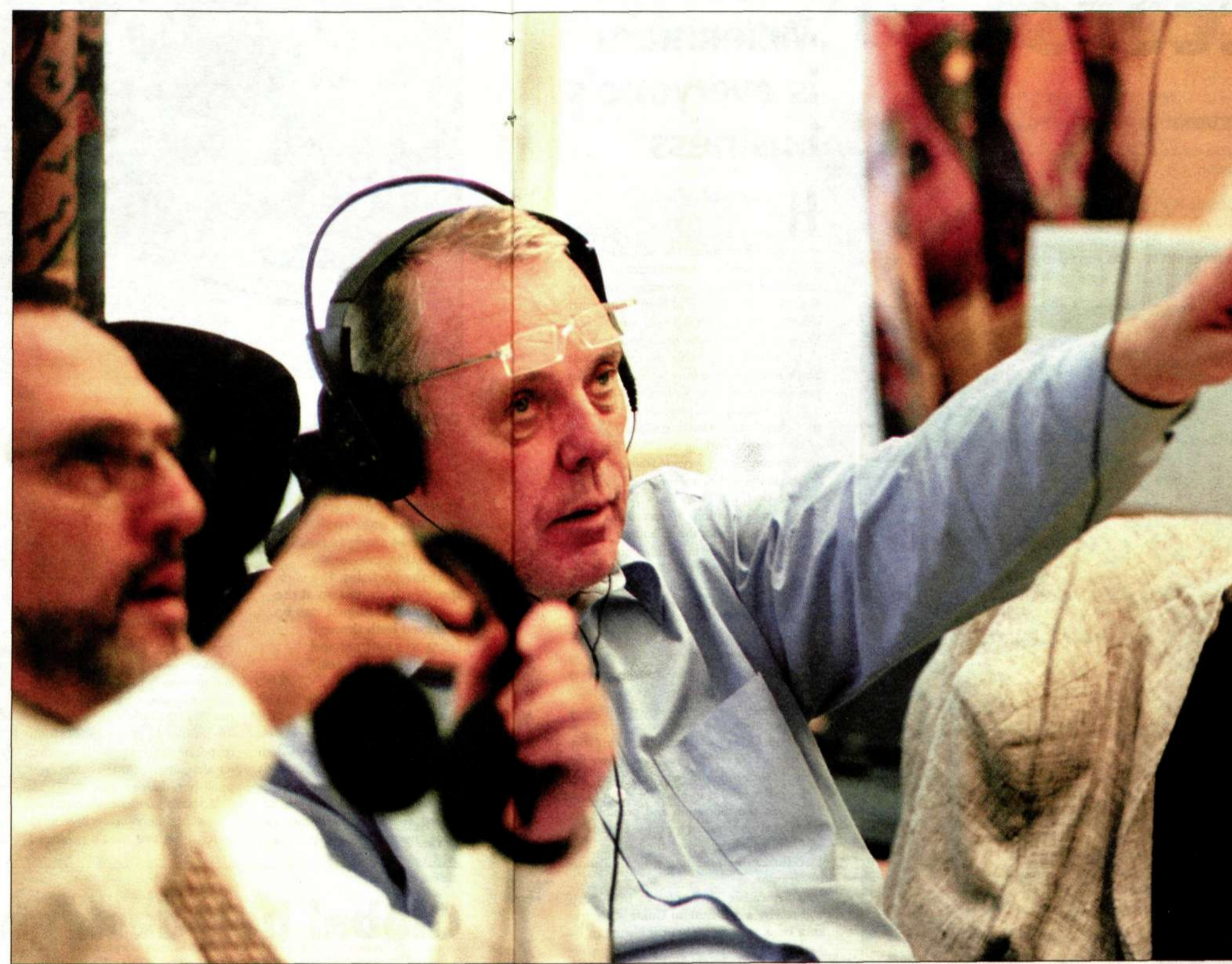
## Theoretical planning

"This was a necessary and useful practice run. Since the work required is dictated by events, theoretical planning is not sufficient. We

have to cooperate together in practical terms in order to see how our efforts really function. This time, nothing major went wrong. However, as in all practices, there's always room for improvement in our internal processes," says Hugo Österlund, one of the team leaders at the control center at Ericsson's head office at Telefonplan in Stockholm.

At Telefonplan, all information was gathered and processed before being sent out in the form of status reports and press releases, both internally and externally. All events were also marked clearly with the words, "This is a millennium exercise."

A flood of questions from customers and the media poured in to the press group in Stockholm - all in line with the rehearsal's scenario.



Roland Sjöo, the Ericsson corporate Millennium Coordinator was working around the clock during the Y2K exercise. He says that the

organisation has learned much and it means that Ericsson will be better prepared during the millennium shift.

Photo: Lars Åström

## EARLY WARNING SYSTEM

Web-based Early Warning System (EWS) is Ericsson's tool for the internal flow of information during the millennium shift. During Ericsson's millennium rehearsal, reports from various time zones were compiled directly on the EWS on the Intranet.

During the exercise, it became

which most of our wireline and mobile systems have survived the shift, since we have many different systems in Asia and Oceania."

News from various operators around the world will also be published on the International Telecom Union's website during New Year's Night.

"During the first few hours we'll gain an indication of the extent to

Nils Sundström

apparent that too many people logged on to the system. As a result access will be limited at the millennium. In addition, the web-based system is supplemented with alternative communication solutions via wireline, mobile and satellite-based systems covering all countries and time zones."



The first shift was in full swing when Mats Dahlin, head of Business Segment Network Operators and Service Providers, came to oversee the Ericsson Millennium Operation Center in Stockholm. Photo: Peter Nordahl

**EMOC is an important new addition to Ericsson's various acronyms, although it is an abbreviation that will have played-out its role on January 1, 2000. EMOC, or Ericsson's Millennium Operation Center, is based in Stockholm. This is where decisions will be made about how Y2K serious and global problems will be resolved.**

When Contact's correspondent arrived at EMOC at 2 p.m. on September 8, Elisabeth Lindblad was explaining that Tonga had just reported that it had not experienced any problems.

EMOC consists of three rooms named Alpha, Beta and Gamma. Alfa, where Elisabeth Lindblad is sitting, is the call center, where all calls and e-mail from local Ericsson companies worldwide arrive. The calls and e-mail messages are forwarded to Beta Room, where Ericsson expertise are based. This is where

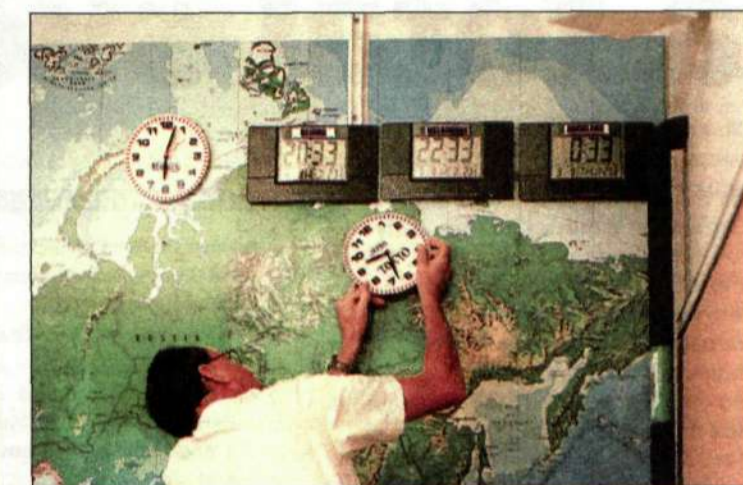
contacts with the local companies are maintained and assistance provided in solving any problems that may arise within Ericsson companies around the world.

## No reported problem

At 2.25 p.m., Eva Svensson of Beta Room points to her screen, where EWS (Early Warning System), a web-based information tool, reports that "New Zealand rolls over with no reported problem."

Every quarter of an hour, Beta Room reports to Gamma Room, where the heads of all the business units are seated around an oblong table. Here, focus is on the business-related consequences of the decisions made.

At about 3 p.m., irritation begins to mount in Gamma Room. It is becoming increasingly difficult to use EWS and its updating function is moving very slowly. Kent Wentzell enters the room and explains that far too many, around 2,000 people were logged on.



The Millennium exercise during the night of September 8 to 9 showed that Ericsson is truly a global organisation. Photo: Lars Åström

# Business as usual at Enterprise Systems

**At the control center of Enterprise Systems in Nacka Strand, called ENAC, three simulated faults were received at 00.15. All three concerned a customer who was not able to dial the 009 prefix from the MD110, BusinessPhone or the Mobility Server.**

"The reports were just some of the simulated faults we had secretly planned in different parts of the world to see how effectively our service organization would handle them," says Per Granqvist, manager for millennium issues.

## Full-scale efforts

The faults were detected by the Enterprise Contact Center (ECC), a permanently staffed, 24-hour call center. After 15 minutes, full-scale efforts were in progress to correct the faults using ordinary resources and product units affected by the reports. Every day, ECC handles all kinds of major and minor problems that cannot be resolved locally.

"Business as usual is the underly-

ing theme for all efforts by Enterprise Systems to monitor the millennium shift," says Johan Holmqvist. "Naturally, when the time comes, we will strengthen our service readiness to a level higher than normal."

## On-site service

The Enterprise Contact Center received about 10 reports of faults and malfunctions during Ericsson's intensive three-hour live exercise. All of the faults were simulated, but they were based on highly realistic scenarios. When one of Ericsson's global customers demanded extraordinary assistance, a realistic scenario was set in motion, complete with a disgruntled customer, helpful sales personnel, on-site service and a curious journalist.

"Sales personnel in the field play an extremely important role in communications with customers when serious faults occur," says Bo Emanuelsson, manager of global customers and one of the persons at the control center.

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# The center of activity

At 3.28 p.m., Stig Rune Johansson from Beta Room rushes in and things begin to heat up, when he explains that a report had been received about a simulated virus that threatened part of a switching system. This necessitates a videoconference with the information center at Telefonplan, which is advised to prepare a press release, since the virus could cause a "real" crash. A solution is found a few hours later and the all-clear is sounded.

## Roles and duties

At 10.55 p.m., the second shift takes over and it becomes apparent that the switchover had given rise to a few problems. For example, there is some uncertainty regarding roles and duties.

At exactly midnight, someone shouts "Happy New Year" and the move from the eighth to the ninth of September passes calmly.

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# The millennium test a total success

As the evening progressed and September 8 moved into the early morning hours of September 9, 1999, most Ericsson companies around the world were conducting a full-dress rehearsal in preparation for the millennium shift. In Melbourne, Australia, 90 employees stood ready throughout the night at Ericsson's office and at facilities operated by Telstra and Vodafone, Ericsson's largest customers in Australia.

"The success of the live exercise last night confirms that Ericsson in Australia has made very significant progress in its Y2K preparations, while also assuming very serious responsibilities on behalf of its customers," says Dirk Howindt, General Marketing Manager of Ericsson in Melbourne.

## Full-scale readiness exercise

Ericsson in Australia cited two major reasons for a full-scale readiness exercise on the night of September 8/9, 1999. First and foremost, there was a risk that real problems might arise, since the number 9, which occurs frequently in the date 9/9 99, means eternity in certain older programming languages, including Cobol. The company also wanted to take advantage of the opportunity to conduct a full dress-rehearsal and appointed designated personnel to handle a host of different problems that could arise in conjunction with the millennium shift.

Ericsson's large command center was situated at Broadmeadows, about 20 minutes by car from central Melbourne. The air was filled with excitement and anticipation during the late-evening of September 8. Ericsson's personnel knew that real problems could arise. At the same time, they accepted the Y2K dress rehearsal as a challenge.

## Real test on New Year's Eve

"It was exciting and enjoyable. Although no real problems occurred, we noticed some areas where improvements can be made as we prepare ourselves for the real test on New Year's Eve. Last night, we learned more about the effects of stress and how we work together under pressure situations. We also know now that we need more clearly defined roles as the new millennium approaches," says Peter Louey, Support Manager for TDMA, and one of the participants in the Y2K readiness exercise.

If real problems had occurred during the night, Ericsson personnel in Fiji and New Zealand were prepared to warn Ericsson companies around the world. The advance notice would have provided a chance to implement required measures to correct the problems before midnight or, as a last resort, turn back the clocks.



As sun set over Melbourne the millennium exercise intensified. Australia was one of the first countries to see midnight.

Photo: Frank Styevko

## EVENTS DURING THE NIGHT

Reports received at Ericsson's command center at Broadmeadows, Australian time:

**22.00:** Fiji passes 00.00.

**22.17:** Telstra in New Zealand reports that TDMA network is OK.

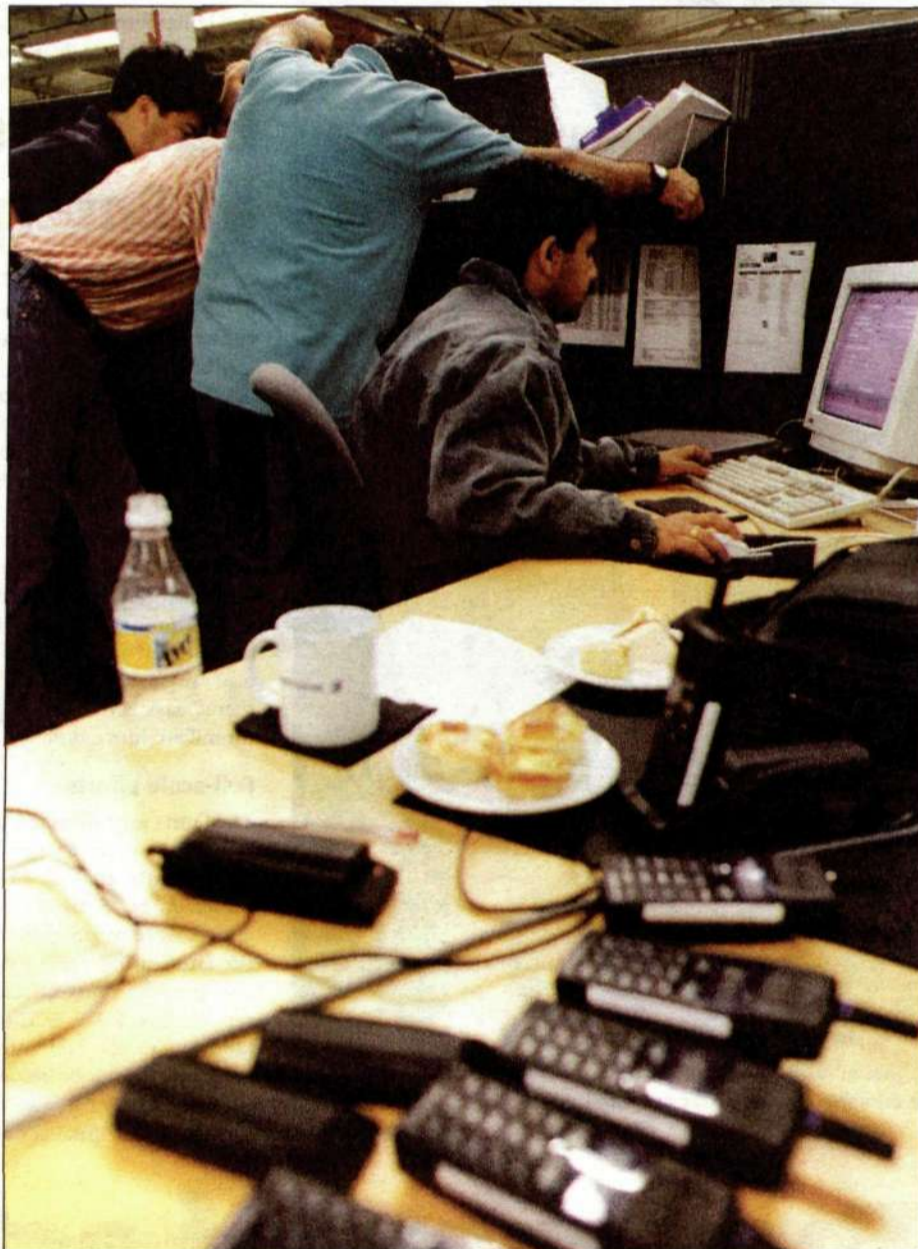
**22.30:** Exercise scenario is distributed via e-mail: Ericsson in Australia has been hit by a virus in the AXE-system.

**22.40:** Vodafone in Fiji reports everything is A-OK.

**00.00:** Midnight in Melbourne, nothing to report.

**02.30:** Exercise scenario is distributed via e-mail: ECN network is down.

**02.40:** Exercise scenario is distributed via e-mail: LAN network malfunction.



In case of landline failure the team had mobile phones from all three Australian network providers: Telstra, Vodafone and Optus. As an emergency back-up torches and portable lighting were at hand.

Photo: Frank Styevko

"The exercise last night provided an excellent opportunity to test our routines, and the results have confirmed that our Early Warning System actually works. A support group from Vodafone called New Zealand and kept telephone lines open past midnight to make sure

no malfunctions occurred in any of the AXE switches," explains Helmut Kerber, Ericsson's live exercise manager at the Broad Meadows command center.

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## BACKGROUND

Ericsson in Melbourne, Australia is taking a very serious approach to potential Y2K problems. A full-dress rehearsal was conducted as early as August to test the functionality of all routines. The company's careful preparations have been prompted in part by stringent Y2K demands placed on all suppliers by Telstra, Ericsson's largest customer in Australia. Telstra has developed a readiness model with different time zones, which has set an example for Ericsson globally.

In 1994, Ericsson in Australia and Telstra

signed a seven-year agreement that established Ericsson as a strategic partner. Ericsson has supplied the Australian operator with GSM networks and the analog AMPS-network (Advanced Mobile Phone System). Telstra is Australia's largest mobile telephone operator by a broad margin. The company's success is attributable to its ability to derive maximum benefits from the skills and expertise of its suppliers. In addition to Ericsson, Telstra has also signed partnership agreements with Alcatel, Nortel and Siemens.

## KRONIKA



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## Millennium is everyone's business

How successful the millennium shift is for Ericsson depends largely on our human resources – our employees and their commitment. The New Year's holiday will require the commitment of a large number of employees who either need to be at work or be accessible at home. Altogether this affects about 10,000 people worldwide at Ericsson. Everyone who needs to be at work or be accessible at home during the New Year's holiday will be informed by his or her manager no later than September 30th.

In Sweden, and the majority of the countries where Ericsson has operations, compensation rules for working over New Year's Eve are now complete. Everyone who is working or who in one way or another needs to be accessible over the New Year's holiday will receive compensation in accordance with specific guidelines for the millennium shift.

To aid and inspire this millennium work, the Millennium Program Office (MPO) has developed a checklist with a number of important points that can serve as a guide for that work.

**THE MOST IMPORTANT** questions are who will work and what kind of compensation they will receive. But there are also many other things to consider. One example is that labor unions, in many cases, need to be informed. Other issues include making sure that key people really are accessible over the holiday weekend and whether there are plans and measures in place for extra food, beverages, transportation and possible accommodation required for those employees who will be working over the holiday. The checklist can be found at: <http://millennium.ericsson.se>

In September, all employees in Sweden will receive a Millennium Guide – a reference book with facts about millennium issues that will serve as an information resource for Ericsson's employees and their families. The guide contains information about how the millennium shift will affect working life, the home environment and society in general. It contains technical information and an overview of which machines and services could possibly be affected by the millennium shift at work, in the home and in the community, and how those problems can be avoided. The guide will also be available for adaptation for other countries and languages.

**IT IS IMPORTANT** that all personnel managers deal with millennium-related employment issues and that all employees are involved, regardless of whether they need to work over the New Year's holiday or not. All employees need to be completely clear about what is expected of them, what can be expected to happen and how potential problems will be dealt with. Our customers always need to remain the central focus. The millennium shift will be a very major test of Ericsson's cooperation and partnerships. Customers must be able to have full confidence in us and be secure in the knowledge that the millennium shift will be a big success for both them and us.

Britt Reigo is Senior Vice President, Corporate Human Resources at Ericsson.



# Major personnel changes expected

**Ericsson's major restructuring program is now moving into an accelerated phase in order to implement the planned changes. Almost 15,000 employees will be affected by the end of the year 2000. And it's likely that further changes will be made.**

The original restructuring program, implemented at the beginning of the year following Ericsson's comprehensive reorganization, affected 11,600 employees. The latest restructuring will extend over a two-year period and involve a total of 14,800 of the company's 102,000 employees.

"We've reviewed our products and positions in a more systematic manner. That's why we needed to make more changes. The changes involve a variety of measures, including some layoffs," says Bertil Bogren, who is overseeing the company's restructuring program.



Bertil Bogren

"Changes in the product support chain and within administrative areas are providing greater opportunities for restructuring than what we anticipated in January. The plant at Visby on the Swedish island of Gotland, for example, which was outsourced to Flextronics this spring, did not play an active role in those 11,600 positions," says Bertil Bogren.

Ericsson's acquisition of companies this spring along with some new recruitment has meant that reductions in the total number of employees within the company have not kept pace with plans. The restructuring will also free up resources that can be used within new areas.

## Two thirds outside Sweden

More than 11,000 of the nearly 15,000 positions that will be affected by restructuring can currently be found in the Network



**The supply chain is one of the areas that Ericsson's comprehensive restructuring program is affecting. Currently, there are too many links in the chain from the time an order arrives until the time the products are delivered and installed for the customer.**

Photo: Lars Åström

Operators business segment. Approximately two thirds of those jobs are located outside Sweden. The biggest changes will occur primarily in the product support chain, and within administrative areas, since new work routines will be introduced.

Ericsson's Executive Management Team believes that its worldwide restructuring program will save SEK 3.5 billion annually, starting in 2001.

The main reasons for the re-

structuring are the rapid technological changes that are occurring within the telecom and datacom industries. In addition, new work methods mean that today's products require even less effort to make. This is affecting Ericsson's development and manufacturing while new supply routes and IT tools are changing work content.

The transition towards open systems also means that Ericsson is now able to procure more

components from outside suppliers.

"It's incredibly important to influence things and make changes while we have the initiative to do it ourselves," says Bertil Bogren who emphasizes the importance of having a positive and constructive view towards change.

"We shouldn't view change as a threat but rather an opportunity. We're working in an interesting and rapidly expanding industry in which we're a very active player in creating this New Telecom World. With that in mind, it's important that we hone our ambitions and our ability to change," says Bertil Bogren.

## Changes made for 4,000

Since the restructuring program began at the beginning of this year, measures have been implemented which have affected 4,000 employees.

Further restructuring will affect another 4,500 people by year-end. Consequently, during the year 2000, measures will be taken that will affect the remaining 6,300 of the 14,800 employees who have so far been identified.

These rapid changes within Ericsson will continue even after the major restructuring program, says Bertil Bogren.

## "Basic structure remains"

"The basic structure of the new organization that was decided in January of this year will remain. On the other hand, we have an ongoing need to oversee the operation. This is a living process which will continue," says Bertil Bogren.

One area that will be expanded significantly in the future is electronic commerce.

Once customers are able to easily order prespecified products and solutions from Ericsson, that will affect both product development and work methods throughout the entire order process.

Nils Sundström

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## INDUSTRY NEWS

### Cisco takes over two new companies

► U.S. IT mammoth Cisco is investing USD 7.4 billion – nearly SEK 62 billion – of its own shares to purchase two newly started companies. The companies – Cerent and Monterey Networks – have technology that uses fiber optics for faster Internet traffic.

Cisco dominates the market for routers, the large switches that direct traffic on the Internet. When voice, data and video communications converge in the new data networks, the market thus created will have enormous growth potential. With the purchase of Cerent and Monterey Networks, Cisco hopes to strengthen its competitive position vis-à-vis telecoms such as Ericsson.

California-based Cerent develops a product that facilitates transmission of large amounts of information over both data networks and telephone lines. Quite simply, the product, which uses fiber optics and advanced software, prevents network traffic jams.

Texas-based network company Monterey Networks, which Cisco is buying for USD 500 million, in turn develops the next generation of core networks for fiber optics.

### Strategic IBM-Cisco alliance

► IBM and Cisco have signed a technology agreement worth USD 2 billion. Cisco has agreed to purchase IBM technology over the next five years and simultaneously purchase the patent rights to it from IBM's Network Division. The companies are also creating common service facilities.

The strategic alliance enables Cisco customers to use support from IBM Global Services with their Cisco products. The two companies have also agreed to develop joint solutions for e-commerce and for their customers' network requirements.

### Sonera first with WAP services

► Finnish mobile operator Sonera is first in the world to introduce the coming WAP services in its GSM network.

WAP (Wireless Application Protocol) is a license-free protocol that allows cellphone users to access the Internet using their phone. Sonera's WAP service offers account statements, telephone directory, the Finnair flight schedule, news from CNN, advertising in the Yellow Pages, and various services provided by the Pohjola insurance company. The first WAP phones, model Nokia 7110, are scheduled for release in September.

### Nortel stronger in networks

► Canadian telecom supplier Nortel has purchased Periphonics Corporation for USD 436 million – about SEK 3.6 billion.

Periphonics develops products used in "call centers," which manage telephone services for businesses. Nortel's strategy is to link the products to the Internet to create a new type of call center.

### Motorola to focus on IP technology

► U.S. telecom supplier Motorola plans to recruit 1,400 researchers to build new wireless data and telecom networks based on IP technology, according to Motorola's network-solutions manager, Bo Hedfors, in an interview in Swedish daily Svenska Dagbladet.

Hedfors, who resigned as head of Ericsson in the U.S. a year ago, says that Motorola is also focusing on developing mobile phones and applications for the new networks.

## RESTRUCTURING USING A VARIETY OF MEANS

The Corporate Executive Team has accelerated both the speed and scope of Ericsson's restructuring program. The recently announced restructuring of nearly 15,000 jobs is coming to life through a variety of measures.

- **Cutbacks.** Ericsson is reducing the number of employees by closing down units, such as manufacturing in Norrköping, Sweden, with 600 employees. Collaboration with staffing agencies, such as Proffice, is a model that could be used in several different places including overseas.
- **Outsourcing.** Ericsson is selling off units

to companies who can see business opportunities in serving Ericsson and others. American contract supplier Flextronics has, for example, taken over Ericsson's plant in Visby, Sweden with 900 employees.

- **Management Buy Outs.** Recently, portions of the sales organization for the MD 110 business switch and Business Phone in Austria were sold off in this manner, affecting 400 employees.
- **Changed product focus.** The transition to more datacom and IP is influencing several of Ericsson's development and product units.
- **Spin-offs as a result of changed strate-**

**gies or the need for concentration.** Among other things, there is a need for greater coordination within Ericsson's design operations.

- **Changes in the chain of delivery.** Today, Ericsson has too many links from the point where a customer order comes in, to where the product leaves the plant, to where these products are delivered and installed for the customer. The potential for savings here is great by methodically simplifying flow.
- **Administrative changes.** New rational IT tools are changing work methods and providing economies of scale.



# T28 – sophisticated music

Technically advanced but very easy to use. A small, intelligent telephone with a surprising design. Those are phrases which describe Ericsson's new mobile phone, the tiny T28, which is now being launched.

In developing the new phone, telephone users were made the main focus. With its new interface, voice activation and intelligent accessories, the T28 is designed to be a graceful tool in the hands of the user.

The primary objective was size. Already at the start of the project, engineers at Mobile Communications in southern Sweden had determined their goal: to make the next generation of Ericsson phones the smallest on the market.

And they have certainly succeeded. Utilizing completely new technology, the T28 weighs in at a mere 83 grams and is now the world's slimmest and lightest GSM telephone.

Goal number two was intelligence. Despite its small size, the T28 is chock-full of new features. But this is not simply technology for technology's sake. Voice activation, a new menu system and intelligent accessories are designed to make the T28 a convenient, easy-to-use tool.

"We're setting a new standard with the T28," says project manager Johan Frogner. "Never before has user friendliness been such a guiding principle in the development of a new phone."

## Entirely new interface

For experienced users of Ericsson phones, the T28's user interface is the biggest surprise. Although an Ericsson feel remains, with menu systems reminiscent of previous models, a great deal has changed.

Using a combination of symbols and text, T28 users can easily navigate through the phone's many functions and fitnesses. There are shortcuts to the most-used functions, and every function is explained using help texts in the pop-up menus.



Johan Frogner, project manager for the T28 and Fredric Mattsson, product manager, both of Ericsson Mobile Communications in Lund, Sweden, have made user-friendliness their guiding principle for phone development. Photo: Lars Åström

"With voice activation, it's possible to avoid navigating altogether," says T28 product manager Fredric Mattsson. "You simply say who you want to call and the telephone does the rest."

Along with the T28, a host of new intelligent accessories are being launched. Chargers, an infrared modem, hands-free equipment – they all communicate with the telephone and control its behavior. Johan Frogner gives an example.

"The phone can be programmed so that every time it's placed into a desktop charger, it forwards calls to a wireline telephone. If I put my T28 in the charger at the office, then it forwards calls to my work number."

At home, calls are forwarded to my home number, and so on."

Just as important as what it contains is the T28's casing itself. A focus on appearance has made design a central part of the development of new phone models. Not even the most advanced technology in the world can save a telephone that people consider ugly. New mobile phones need to look good if they are going to sell well.

## Timeless design

Tom Waldner is the chief designer at Mobile Communications' design department. He and his colleague, Richard Lindahl, are the people responsible for the T28's appearance.

"Our goal has been to provide the T28 with a timeless design. At the same time, we wanted people to react with surprise when they see the phone. It should stand out as something new, something different. The design is simple and sophisticated, typically Scandinavian."

The T28 is aimed at advanced mobile phone users, those who have owned several phones previously. It is an advanced product for the more exclusive end of the market.

With that in mind, the design could not be too extreme. Those who buy a T28 want it to last a long time. It shouldn't have a design that one grows tired of after only a few months. Tom Waldner uses an analogy from the music industry to explain.

"The T28 isn't designed to be a pop hit that immediately sticks in your head, but quickly becomes tiresome. The T28 is more like sophisticated music. Somewhat inaccessible at first, but with a power of attraction that grows every time one listens to it."

Niclas Henningsson

## Small size impresses

It is their small size which impresses Lars Lallerstedt and Kristofer Hansén, both professors at the University College of Arts, Crafts and Design in Stockholm. Contact recently gave the two an opportunity to review Ericsson's smallest phone.

"I like the fact that it is so small and so lightweight," says Kristofer Hansén. "It's easy to carry around with you. There's nothing that sticks out of your shirt pocket. A set of keys is definitely worse," says Lars Lallerstedt, plunking down his impressively large set of keys next to the much smaller and sleeker cell-phone.

"There's been a belief within the industrial design world that mobile phones couldn't get any smaller, but I think that phones can be just as small as you want," says Kristofer Hansén.

Despite their enthusiasm about its small size, both professors think Ericsson still has a little work to do. Lars Lallerstedt is not enamored with the flip cover.

"My hesitancy is with the flip cover. It probably provides better sound, but it feels a little bit like having

webbed feet. Plus, there's the risk that the moving parts could break should one drop the phone onto the floor, for example."

Although he does agree that the flip cover's design is not the best, Kristofer Hansén has a different opinion. "I think the cover is more of an advantage. You avoid getting dirt and sand into the buttons. Moreover, you don't need to have the key guard on."

This is no ordinary launch," explains Per-Axel Larsson, who is overseeing the campaign in Europe, the Middle East and Africa. "A whole new generation of phones is being marketed, and for that we need to do something different. This ad campaign for the

"I would gladly liked to have seen a little more shape put into it, but the fact that Ericsson has not strictly followed the trend towards rounded designs is not a disadvantage either. It's all a matter of trends," says Lars Lallerstedt.

"We're now starting to see that cars are returning to sharper lines," says Kristofer Hansén.

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## THE T28 IN BRIEF

The T28 is the first model in Ericsson's next generation of GSM telephones. The T28s contains 37 different languages while the T28sc can handle the input of Chinese characters for text messages and the telephone directory.

Ericsson is rolling out a whole

new technology platform with the T28. New features and a new user interface will make the telephone easy to use. Using an entirely new battery technique, lithium/polymer, the batteries are now extremely small, but with the same capacity as previously.



The design department in Malmö, Sweden, was looking for a simple, sophisticated and typically Scandinavian design. Tom Waldner, chief designer, stands in the middle. Photo: Lars Åström

# for discerning listeners



In the TV ad for the new T28 phone, aliens beam up a cow, a man and a T28...



...carefully conduct studies on the three different objects...



...and conclude that "the smallest is the most intelligent" – and that it tastes good too.

## Extraterrestrial marketing

Small, intelligent and tasteful. That's the message that will sell the T28. To do so, Ericsson is launching a massive ad campaign. A whole new generation of telephones will be presented, an event requiring more than just the usual. Or, as ad campaign manager Per-Axel Larsson sees the situation:

"An innovative product requires innovative advertising." Huge amounts of advertising materials have been developed to herald the launch of the T28, the first in a new generation of Ericsson GSM phones. The campaign will extend its message to the masses through television, radio and print ads along with a campaign web site on the Internet.

This is no ordinary launch," explains Per-Axel Larsson, who is overseeing the campaign in Europe, the Middle East and Africa. "A whole new generation of phones is being marketed, and for that we need to do something different. This ad campaign for the

launch of the T28 must stand out." In fact, the advertising campaign is quite out of this world. Human actors have been reduced to playing extras in the television ads while the main role is instead played by the phone itself, and the supporting roles are filled by extraterrestrials.

"The T28 is an extremely good looking telephone," says Per-Axel Larsson. "We want to emphasize that point by making the telephone the absolute focus. The outer space theme is designed to highlight the telephone's intelligence."

"Smallest is smartest" In the ad, the earth is paid a visit by space aliens in search of intelligent life. They beam up three things – a cow, a man and the man's tiny T28 – into the space ship. In their quest for intelligence, the cucumber-like aliens fall for the T28. "The smallest one is the most intelligent," they quickly conclude in their unintelligible gibberish.

The film ends with the T28 being eaten by an alien who laughingly concludes that it also tastes good, illustrating the third part of the campaign's slogan – small, intelligent and tasteful.

"Humor and the unusual method of presenting our message are the

foundations of this campaign," says Per-Axel Larsson.

The same message and characters will be appearing in newspaper ads and on display materials used by T28 retailers. Radio ads and the cam-

aign's Internet web site will, however, provide listeners and surfers the opportunity to find out what happens to the poor man who loses his T28 to the distant aliens.

"All the campaign materials build on the same theme," explains Per-Axel Larsson. "TV, radio and newspaper ads all combine into a cohesive whole which forms a very strong campaign."

Niclas Henningsson

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Niclas Henningsson

need to be imbued with an air of status. The ads need to represent something worth striving for.

"Moreover, the T28 campaign will be complemented by a campaign for Ericsson's overall product line," explains Martin Blomkvist. "The portfolio for that campaign will include the new T, A and R models, and will use actors to explain the advantages of the new telephones in various situations."

The Asian campaign consist of TV commercials, print ads in newspapers and magazines, as well as display materials for retailers. The T28 product launch will get underway in the beginning of September and will coincide with the European launch.

Niclas Henningsson

## T28 launch in Asia to focus on the product

When the T28 is launched in Asia, the telephone will be the sole focus of the advertisements. Ericsson's new flagship will be marketed showcasing its design and features. There are no plans to use a narrative ad campaign like the one in Europe.

"We don't want to muddy the picture," says Martin Blomkvist, head of marketing in Asia.

The Asian launch of the T28 is different from the European one. Although both campaigns are based on sound marketing principles and their target audience and message are identical, the marketers in the two regions have chosen different strategies.

In Europe, the Middle East and

Africa, the T28 will be sold using a humorous story, populated with space aliens. In Asia, however, the focus is clearly on the telephone itself with its sleek design and outstanding features.

"The message in the Asian campaign is that the T28's form and function are combined in a perfect blend," explains Martin Blomkvist. "The campaign's slogan is, 'Truly great design is all in the details.'"

The difference between the European and Asian T28 campaigns is due primarily to differences between the markets. European advertisements are more sophisticated. Humor and unusual angles are required to capture the interest of potential customers. In Asia, on the other hand, ads for prestigious products

need to be imbued with an air of status. The ads need to represent something worth striving for.

"Moreover, the T28 campaign will be complemented by a campaign for Ericsson's overall product line," explains Martin Blomkvist. "The portfolio for that campaign will include the new T, A and R models, and will use actors to explain the advantages of the new telephones in various situations."

The Asian campaign consist of TV commercials, print ads in newspapers and magazines, as well as display materials for retailers. The T28 product launch will get underway in the beginning of September and will coincide with the European launch.

Niclas Henningsson

## WHAT DO YOU THINK ABOUT THE T28?

Anette Sylvander, Skills Development, Sweden  
"The telephone is attractive and trendy. I've only heard positive comments about the T28."



Anders Hultin, ASIC design, Sweden  
"It's nice that the phones have been given some color and more rounded shapes and lines. There's absolutely nothing wrong with the size and the new features, such as voice activation, are good."



Petra Thorell, Concept Development Unit, Sweden  
"The voice activation feature is nice, but the shape is a little too manly. I think that the T28 looks somewhat like an electric shaver."



Peter Södergren, section manager, Mechanics, Sweden  
"This is a fabulous phone. With the right pricing it will sell well. Some people might think the T28 is too small, but for most it will cause a need-to-have reaction."





Over the years, Ericsson has introduced many telephones. In the future, the number of launches will accelerate and we will see more target-group-tailored phones. It is not so simple to keep up with all the new functions and profiles. Contact presents the hot new phones, and a few real Ericsson classics in this mini-guide.

# Test your knowledge of Ericsson cellphones



## Ericsson A1018s

► This is the first model in the new A Series. The Ericsson A 1018s is to be fun and simple to use, in a slim format. The model is designed to attract first-time buyers, consumers who are price-sensitive but still want an Ericsson phone.

Its predecessor is the GA 628. This model, however, has a large display and new icons. In size, the A 1018 is comparable to the Ericsson SH 888. Available in four colors: plum, khaki, steel blue and olive green.

Call time: 3 hours and 30 minutes / four hours  
Standby time: 100 hours / 85 hours  
Weight: 163 grams  
Size: 130x49x27 millimeters  
Market: GSM 900 and 1800  
Target group: First-time buyers

## T10s

► This is a phone for design-conscious consumers. All their clothes and the accessories they carry say something about their personality, including their telephone. Available in several striking colors – cornflower blue, mustard yellow, pink, purple and turquoise. Clear graphic display with up to three lines of text, depending on language. Seven different ring signals, two of which can be composed by the user, plus a built-in vibrating ring signal. Improved voice coding, EFR (Enhanced Full Rate), which makes speech clear and easy to hear. Compatible with all accessories available for the 1700 Series of Ericsson phones.

Call time: Up to 4 hours  
Weight: 146 grams  
Size: 105x49x24 millimeters  
Market: GSM 900 and 1800  
Target group: Young trendy consumers  
Introduced: Late August

## T10sc

► A sister phone to the T10, developed for the Asian market. Complete Chinese interface capable of sending and receiving Chinese text messages and storing Chinese names in the phone book.

Market: GSM 900 and 1800, in Asia  
Introduction: Imminent



## R250 PRO

► Ericsson's first water, dirt and shock-resistant telephone. The first phone to support the GSM Pro system, which makes it possible to combine all GSM-phone capabilities with mobile private radio functionality. Available in two colors – eye-catching bright orange or sober green. An excellent outdoor communications tool for robust, demanding environments.

Market: GSM 900 and 1800  
Target group: Active people who spend a lot of time outdoors in their work or leisure activities and favor reliable, user-friendly products.  
Introduction: This coming autumn



## ER207

► Sister phone to the T28 for the Japanese market. First commercial Ericsson launch geared for the Japanese PDC digital standard. Based on the same platform as the T28 GSM phone.

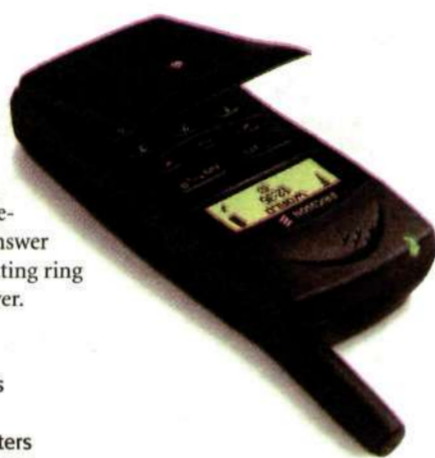
Call time: 120 minutes  
Standby time: 240 hours  
Weight: 93 grams  
Size: 95x49x19 millimeters  
Market: Japan  
Introduced: End of August



## T18s

► First phone in Ericsson's T Series. A light weight phone in a slender compact format. User-friendly, with voice-steered dialing and answer functions, built-in vibrating ring signal and active flip cover.

Call time: 4 hours  
Standby time: 100 hours  
Weight: 146 grams  
Size: 105x49x24 millimeters  
Market: GSM 900 and 1800  
Target group: Consumers who prefer advanced technology and only invest in products they know they need.  
Introduced: Spring 1999.



## T28

► Ericsson's smallest and the world's slimmest telephone to date. New futuristic design with several smart functions, such as voice control, vibrator and new energy-saving battery technology. The T28 has new menu management that enables the user to navigate more easily. It is also possible to create personal profiles to use in different situations. For example, the user may decide to be reachable by only the boss or their child's day-care during an important meeting. As well as all this, the T28 has the advanced functioning of earlier models, such as dual-band and voice control, etc.

Call time: 1.5 to 3.5 hours  
Standby time: 32 to 50 hours, depending on frequency and network  
Weight: 83 grams  
Size: 97x50x15 millimeters  
Market: GSM 900 and 1800  
Target group: Consumers interested in advanced technology and new products. People who choose strong brand names and are willing to pay for the best possible construction and design.  
Introduced: Launched in Sweden in mid-August. To be launched soon in other markets.



## T18d

► A T18 phone developed for the U.S. wireless standard TDMA, primarily for the North and South American markets. Will be available in metallic silver and copper, indigo and pewter.

Call time: 135 to 240 minutes  
Standby time: up to 80 hours  
Weight: 151 grams, 5.4 oz.  
Size: 106x50x23 millimeters (4.2x1.9x0.9 inches)  
Market: TDMA 800 and 1900  
Introduction: Autumn



## A1228d

► Part of the A Series, this phone was developed for the U.S. wireless standard TDMA, primarily for the North and South American markets. Small, neat, reliable, and very user-friendly. A basic phone for more price-sensitive consumers. Will be available in black and twilight blue.

Call time: 3 hours  
Standby time: 80 hours  
Weight: 169.8 grams (6 oz.)  
Size: 51.3x130x19.6 millimeters (2x5.1x0.8 inches)  
Market: TDMA 800 and 1900  
Introduction: This winter



## 1888 World

► For the user who wants to exploit the entire spectrum of GSM services in various parts of the world. The phone automatically chooses the correct GSM network as soon as it is turned on. Suitable for the 900 and 1900 frequency bands and can be used in Europe, the Asia-Pacific region, Africa and parts of the U.S. Will be available in an elegant blue and includes an active flip cover – that is, you answer and hang up by opening and closing the cover. Global travel battery charger included. Compatible with all peripherals designed for the 600 Series of Ericsson phones.

Call time: 4 hours and 25 minutes  
Standby time: 80 hours  
Weight: 201 grams  
Size: 130x49x22 millimeters  
Market: GSM 900 and 1800  
Target group: Globetrotters  
Introduction: Beginning of next year



## R380

► Ericsson's and the world's first WAP telephone, or Internet telephone. Has a WAP reader, by which the user can fetch information from the Web, send e-mail and operate the time manager and address book. The user's options will increase as more and more WAP applications are developed and introduced on the market. Eventually, it will be possible to shop, reserve a table at a restaurant, read the news and obtain financial information and so forth, using the telephone. Also the world's first phone based on the EPOC operating system.

Market: GSM 900 and 1800  
Target group: Aimed at consumers interested in high-performance, advanced functions  
Introduction: In the new year

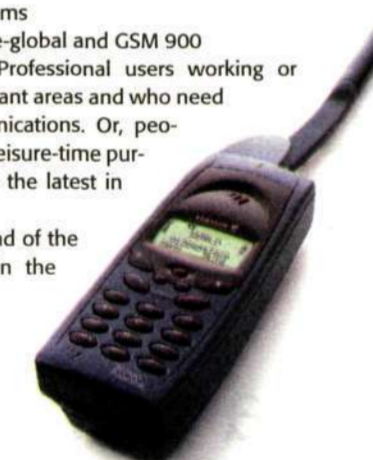


## R290 Satellite

► The market's smallest and Ericsson's first satellite phone for global networks. Outside GSM coverage, it can switch over and operate via Globalstar satellites. Shares certain characteristics of other new Ericsson models. The powerful satellite antenna makes the phone somewhat larger and heavier.

Not expected to become a mass-market product, but rather a niche phone within Ericsson's range. Has built-in modem for data and fax communication.

Weight: 350 grams  
Market: Satellite-global and GSM 900  
Target group: Professional users working or travelling in distant areas and who need secure communications. Or, people with active leisure-time pursuits who favor the latest in technology.  
Introduction: End of the year or early in the year 2000



## FAMILY RETAINERS



## GH388

► A real Ericsson classic. Appeared in 1996 and became an instant sales winner. A reliable, robust phone with good sound quality, suitable for a broad target group. Described on the Consumer Products web site link for phone information as a slender, lightweight (in 1996 terms) and smart phone.

Call time: 1 hour and 55 minutes  
Standby: 33 hours  
Weight: 170 grams  
Size: 130x49x23 millimeters  
Market: Countries covered by GSM networks  
Introduced in 1996



## GA628

► Ericsson's biggest-selling phone ever. Launched in 1997, it quickly became a sales success. Consumers acquired a reliable, functional quality phone at a good price. A removable front allows users to match phone color to their mood or the season.

Call time: 3 hours and 15 minutes  
Standby: 54 hours  
Weight: 160 grams  
Size: 130x49x23  
Market: GSM 900  
Introduced: 1997

# Consumers curious about new models

Whenever Ericsson introduces a new phone model, the company's helpdesks worldwide are inundated with questions. Right now, Maria Sandell at Consumer Products' Info Center in Lund, Sweden, is completely occupied answering questions from people who have submitted inquiries by e-mail.

All e-mail questions from Scandinavia, Africa and the Middle East are routed to Lund. "The number of inquiries varies greatly from day to day. Yesterday, for example, I received a hundred questions in the afternoon alone. The average is about fifty per day," says Maria Sandell.

The consumer must receive a reply within 24 hours. The queries are often about one of the latest Ericsson phone models, about its functioning and where it may be purchased. But it can also be more complicated than that.

"Certain technical issues are extremely time-

consuming. Knowledgeable consumers want to know details, which can take a long time to answer. This job involves a lot of research, particularly on the web, and discussing and comparing notes with colleagues. The aim is to reply within 24 hours. Sometimes it's worth taking more time to produce a proper answer, instead of having the question sent again a few days later."

Certain markets are populated by extremely experienced cellphone users – for example, Western European countries. Their questions go directly to

their own local cell center. The Lund home page receives e-mail questions from other parts of the world. Maria Sandell knows exactly which markets are in the start line-up for mobile phones.

"Africa is coming along more and more, that's quite apparent. Many of the senders of e-mail questions are distributors who want to do business with Ericsson and start selling telephones. Israel, Egypt, Yugoslavia and the Baltic States are other markets on the verge of a breakthrough for mobile telephony."

How then do you stay up to date with all the functions and technical features that accompany each new product?

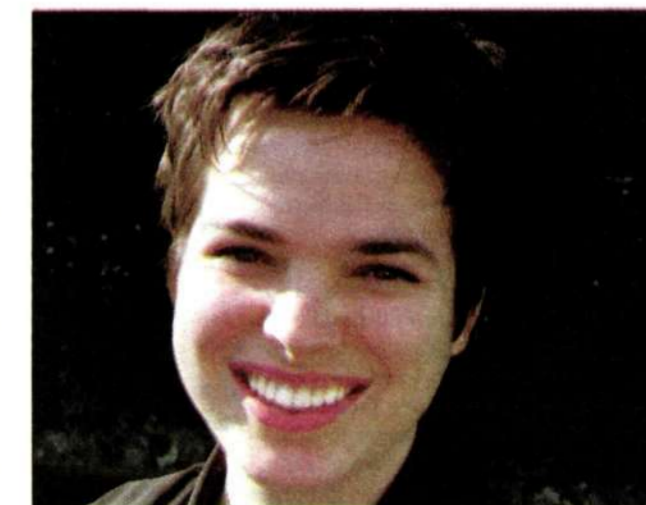
## Manuals to consult

"Before every phone launch we are given a short course. We also have manuals to consult. The best thing is to sit and play with the telephone yourself, but you rarely have time for that. Many questions reappear constantly, so you learn the answers pretty quickly."

The most frequent questions are posted on the web, with answers, so consumers can find them directly.

An example might be questions on how to create and store your own ring-signal tunes. Maria Sandell refers them to the <http://mobile.ericsson.com> web page and the link entitled "Tune your phone."

Lena Widegren  
lena.widegren@me.ericsson.se



Maria Sandell replies to e-mail questions from consumers worldwide. Many people are now asking about the T28. Otherwise, typical questions are: "Can I buy a cellphone abroad and use it at home?" and "How long should you charge the batteries the first time?"  
Photo: Lars Åström



# Preparation vital for working abroad

With 3,500 people on foreign contracts, Ericsson is the second largest company in the world at sending employees overseas. Anyone wanting to work abroad should be a specialist, preferably in the field of technology. Prior to departure, employees receive assistance from a department in Stockholm which works exclusively with foreign contracts.

**E**ricsson has a special department to assist with all the matters that arise in connection with a move.

The International Assignments support unit deals with all the questions and organizes the signing of contracts.

"The advantage of having a central unit which takes care of these matters is that contract employees are treated equally, regardless of which organization is sending them or receiving them," says Britt Reigo, Ericsson's Senior Vice President Corporate Human Resources.

## Most are gone for two years

Currently, 3,500 Ericsson employees are on foreign contracts somewhere in the world. The U.S., Sweden, Japan, China and the U.K. are among the most common destinations. The majority of those who go abroad stay there for two years.

Before making the decision to go, many questions must be answered. Can I take my family? What will my salary be? What are housing and food costs in the country I am going to? Will Ericsson pay for housing and schools, or do I have to pay that myself? Is there a high rate of crime there?

That is why the answers are compiled at one unit within the company: International Assignments, a company function for foreign contracts. This support unit is located at Ericsson in Stockholm. All Ericsson employees throughout the world who are going to other countries on long-term contracts – that is, longer than twelve months – must turn to the unit for assistance.

## Monitors trends in other countries

"There are several reasons why we have chosen to handle contract matters for jobs abroad at a central unit. A large amount of expertise is required of those who work in the area – they must have knowledge of such factors as salaries and conditions, working conditions and taxation in the countries where Ericsson has its operations. It is necessary to continuously work on and monitor developments in the countries

you are responsible for," Britt Reigo continues.

She also believes that it is important that all managers and human resources managers know that all handling of contracts, salary levels and conditions is dealt with at corporate level.

## Long list of preparations

Following consultation with the Ericsson company that is receiving the person who is to be on foreign contract, it is the International Assignments unit which prepares the contract specifying the salary and conditions.

Today, 28 people are employed in providing information and assisting with questions about working abroad. These may, for example, be about visas, medical check-ups, insurance, removals or children's schooling. When you see the list of everything that must be prepared and organized prior to departure, it is not difficult to understand that the processing time is approximately two months.

"It is extremely important that we are contacted as early as possible. A huge amount of pieces must be put into place before people can, or are allowed to, depart," says Ulf Grufman, head of the support unit.

The courses given prior to traveling abroad are appreciated. To date, these have taken place in Stockholm and been held at some of the large subsidiaries around the world, but the unit is preparing a training plan with guidelines for the subjects local companies should deal with during their own local courses.

It is primarily those who have received the offer of a long-term contract abroad who receive help from the International Assignments unit. Those who want to find jobs abroad by themselves must devote their own time to looking.

"As we have so many matters to attend to, we can't promise that the information we give them will be as comprehensive. It is the receiv-

ing company that pays us for our services," says Ulf Grufman.

As an administrator at the International Assignments support unit, it is necessary to be flexible, able to deal with stress and to have a sense of commitment.

"No two days are the same, everything has to be done in a hurry and new questions come up all the time that I can't answer straight away," says Lena Ståhlkvist, the administrator with responsibility for Thailand, Malaysia and Bangladesh.

The work of an administrator includes preparing a country and salary policy, making job assessments and ensuring that salaries are paid.

Answering questions is a major part of the daily work routine.

"One of the most common questions put to us is about salary. There are many factors which have to be considered in order to calculate salaries correctly. We regard ourselves as a knowledge center with the task of assisting those who are going abroad on contract by providing proper and correct information," she adds.

## Quick switch

Other frequent questions concern the conditions in the country in question and the conditions for the journey. In addition to answering many, sometimes difficult, questions, it is important to be flexible and to be able to quickly switch work tasks.

"My daily work is very much dictated by events. It consists of everything from administrative work to quickly organizing the evacuation of Ericsson employees due to natural disasters."

Ulrika Nybäck

ulrika.nyback@lme.ericsson.se

 [www.lme.ericsson.se/lmeu/](http://www.lme.ericsson.se/lmeu/)



Lena Ståhlkvist



Ulf Grufman



Magnus Ask

# Specialists have a better chance

Who gets to go abroad under contract? What are the required qualifications? Contact spoke to Magnus Ask at the Human Resources corporate function, about what is required of those who go abroad and what happens on the spot.

If you look through a number of job vacancy supplements, you discover that those who want to work abroad should be specialized in a certain area. This should preferably be in the field of technology, but economics, management and logistics are also in demand. In addition to professional expertise, it is also important to have interests that go beyond work.

## Genuine interest vital

"A genuine interest in people from other cultures and the country you want to go to is vital. Also, you have to like watching other people

develop and grow," says Magnus Ask.

These characteristics are monitored during the recruitment process.

When the person gets to their destination, they must convey their skills to others. That is why Magnus Ask and his colleagues have produced a training package to facilitate the transfer of skills between contract employees and employees at

local companies. Skills transfer not only means being able to convey skills within a special area, but also being able to spread the company's attitudes and values in a positive manner.

"It is important to learn the art of teaching others. It has been shown that training gives the best on-the-spot results during the first stage of the stay abroad. Prior to the journey, there is so much to think about and there is neither the time nor the desire to deal with this," says Magnus Ask.

## Goal of training locals

It is an important responsibility of management to follow up the skills transfer process and to ensure that everything works properly.

"You can't remain in a position simply be-

cause you enjoy being in a country. The goal should be to train the employees at the local company and then move on," Magnus Ask continues.

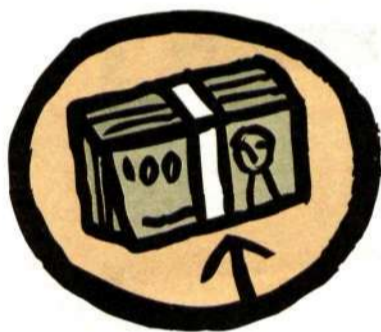
## Recruitment almost exclusively internal

Almost all foreign contract positions are filled with internal applicants and this has a range of advantages. Those who have been Ericsson employees for a long time often have a broad network of contacts and can also convey the corporate culture, which is an important element of knowledge transfer.

Ulrika Nybäck

Read more about experiences of working abroad in Contact 4/1999





Before someone decides to accept a foreign contract, many questions must be answered. At the International Assignments support unit, virtually all the answers are available. Illustration: Jan Olsson

## Everyone is involved

► At the end of August, an Ericsson employee left his work in Israel, accompanied by his family, after his wife had made anti-Semitic comments.

As soon as these comments became known, the Ericsson management recalled the family to Sweden.

"It must never be forgotten that the whole family is representing the company when they are under foreign contract. What happened does of course affect Ericsson's image in Israel," says Magnus Ask of the Human Resources corporate function.

The comments aroused strong feelings throughout Israel, which were reflected in the Israeli press and in angry calls to the local company. Ericsson has run an announcement in four Israeli dailies in which it apologizes for what happened, in both English and Hebrew.

"Ericsson issues around 1,400 contracts every year and 3,400 employees are currently on long-term contracts throughout the world. Nothing like this has ever happened to us before," says Magnus Ask.

The possibilities for the company to evaluate the suitability of accompanying family members are limited.

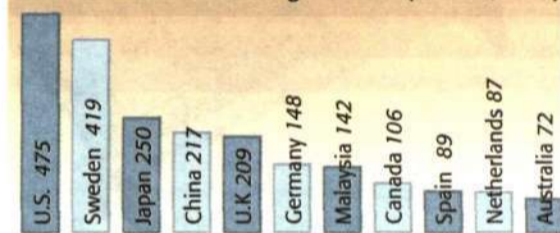
"This subject has been discussed in the past, but it is difficult for us to determine who is suitable and who is not," Ask continues.

The International Assignments unit covers the subject of "respecting a country's laws, rules and customs" during its preparatory courses. All those going abroad on foreign contracts receive a brochure detailing the rules that apply.

"We will make this message even clearer during our preparatory courses," says Ulf Grufman, head of the support unit.

### U.S. TOP AMONG RECEIVING COUNTRIES

Chart showing the number of contract employees in the most common receiving countries (June 30, 1999)



## Costs affect salary

► One important question when someone goes abroad under contract is the salary. There are many parameters to take into consideration when this is calculated.

The cost of living varies considerably in different parts of the world. There are countries in Asia which are almost three times more expensive than countries in Eastern Europe. If someone is to have the same purchasing power or live equally well in both of these regions, the salary paid will differ very much.

However, it is not as easy as simply adjusting the salary according to an index of living conditions. It is only the part of the salary intended for local consumption that is affected.

As a rule, the company pays taxes, housing, schools and trips home and other expenses, which makes salary comparisons even more complicated.

## Shell tops the league

► Ericsson has a total of 3,500 people on foreign assignments. This makes Ericsson the world's second largest employer for foreign contracts. Shell tops the list with 5,000 employees.

During the past year, the International Assignments unit issued 1,438 long-term contracts, or 6.5 contracts per working day.



# Policy for better recruitment

"Ericsson needs to improve its recruiting and go about it in a more professional manner. Today, the competition for talented university graduates is more fierce than ever, a trend that is likely to continue," says Per-Olof Nyquist, head of Competence and Talent Management at the Human Resources corporate function.

Ericsson has implemented a new, centralized recruitment policy. It will serve as the basis for attracting the best people to Ericsson. In the past, recruitment was done on a local basis, but with the globalization of the workplace, Ericsson's recruitment needs to be done on an international level.

"We're already doing a good job of attracting new employees to Ericsson. But it hasn't been done systematically throughout the entire company, and many of the good examples of successful processes have remained at the local level," says Per-Olof Nyquist.

This autumn, a working group will explore and inform about good

examples of successful recruiting from both within Ericsson and other outside companies. The group will also establish guidelines to clarify existing recruitment policies.

New jobs being created today require increasingly advanced qualifications. This is true both in society at large and for Ericsson

in particular, and means that there are many companies who would like to employ recent graduates. The number of university graduates has not been keeping pace with demand which explains the increased competition for new employees.

An important part of Ericsson's new policy is that people should not just be recruited to fill vacancies and newly created positions.

"If we find someone with the skills we need, we should hire him or her," says Per-Olof Nyquist. "We simply

can't afford to lose good talent. We're so big that we can always find a job that fits a highly talented person."

For much too long, Ericsson and other companies have simply looked upon employees as units, according to Per-Olof Nyquist.

## Performance more important

With industrialization in the west at the end of the 19th century came the belief that workers were expendable units, leading to the standardization of jobs to the greatest extent possible.

"When you stop and think about it, the number of hours worked is a poor measure of someone's performance. This is especially true for the jobs that we have at Ericsson today. And yet we primarily continue to count heads instead of measuring accomplishments."

Today's university and college graduates are placing greater demands and are more knowledgeable about the companies they are applying to. As a result, a well-known company with a good reputation always has an easier time finding talented workers.

"That's why it's important for Ericsson to really make the most of the company's many positive aspects, including the fact that we are a truly global company. Those of us who work here sometimes take that for granted, but being a global company is something which attracts young people today," says Per-Olof Nyquist.

"Job applications look completely different today compared with just a few years ago. New graduates don't simply apply for a certain position, but rather for a certain emphasis with a request to work in either Western Europe or perhaps the U.S. or wherever he or she prefers."

"None of our competitors has the same geographic coverage that Ericsson does. Many people would like to have the option of an international career. That is something Ericsson can offer," Per-Olof Nyquist continues.

## Train and recruit

There are two routes available when new jobs require more skills – either recruit new talent or train existing employees.

"We're doing both," says Per-Olof Nyquist. "This autumn, we're starting a very ambitious campaign to increase Internet expertise within Ericsson. At the same time, we still have a need to recruit many talented new people. Therefore, it's important for Ericsson to go about recruitment in a professional manner."

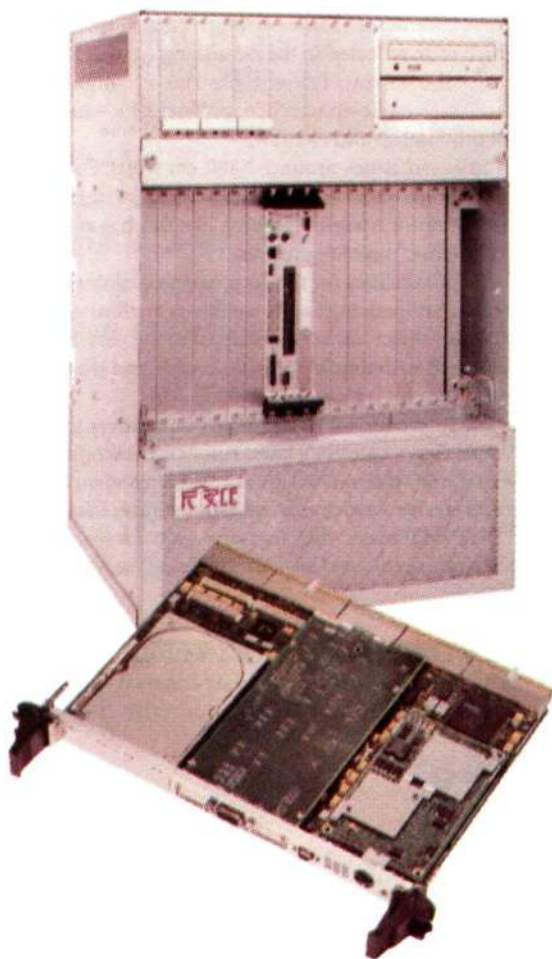
One of the plans that Ericsson has to help make the company a more attractive employer is an international trainee program. Twenty people from Ericsson's seven largest markets will be starting the two-year program in October that will provide them with good insight into Ericsson.

"It's not a free pass to a top job within Ericsson, but it will create good opportunities for the right individuals," says Per-Olof Nyquist.

The trainee positions have been highly sought after. In Brazil, for example, there were 840 applicants for two positions.



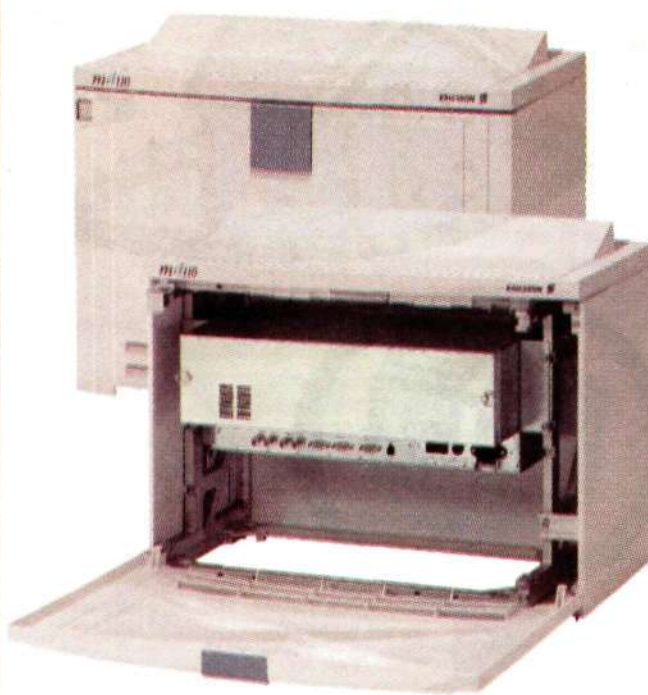
Per-Olof Nyquist



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Turkey is a modern country with strong historic ties. A donkey cart rolls quietly through traffic in the harbor city of Tekirdag.

Photo: Lars Åström



Islam is the dominant religion in Turkey and the number of mosques in Istanbul is considerable. This one is adjacent to the famous spice market.

Photo: Gunilla Tamm

## Turkcell to build the new Silk Road

Turkcell is probably one of Turkey's fastest growing and most successful companies. Since the start in 1994, the GSM operator has grown to employ 1,800 persons serving more than 4 million subscribers in its domestic network. Turkcell is now building a GSM network along the old Silk Road passing through such countries as Azerbaijan, the Republic of Georgia and Kazakhstan.

"We are building the new network together with Ericsson, which is not only our supplier, but an important business partner," says Turkcell's Chief Executive Officer Cüneyt Türktan.

Turkcell is owned by the Turkish industrial group Cukurova, which is the majority owner, and Finnish telecom operator Sonera, which has a 41 percent stake. From the beginning, Ericsson has been the sole supplier for the company's GSM system.

"Given the fact that Sonera owns such a large share of Turkcell, Nokia is very interested in becoming a supplier, so we certainly can't rest on our laurels," says Sören Ahlstedt at Ericsson Telekomunikasyon in Turkey, who is key account manager and responsible for Turkcell.



Sören Ahlstedt

Ever since Turkcell opened its cellular network five years ago, subscriber growth has been very strong. June was a record month, with 300,000 new subscribers. Although the service has not yet been formally launched, 20 percent of this figure were pre-paid subscriptions for which calls are paid in advance. The monthly average for mobile phone calls is about 160 minutes.

Turkcell's ambition from the start has been to establish itself outside the country's borders in the former Soviet republics in the Caucasus re-



Cüneyt Türktan

gion. In press advertisements, Turkcell now proclaims that it is building "the new Silk Road."

"That's correct. We now operate GSM systems together with local partners in Azerbaijan, Georgia, Kazakhstan and Cyprus, and we are continuing to invest in the region," relates Cüneyt Türktan.

Ericsson also has local representation in these countries, a factor which Turkcell considers very valuable in the relationship between the two companies and which Cüneyt Türktan prefers to call a partnership.

### Cyprus example of speed

Installing and putting a new mobile network into operation quickly is one of the requirements that Turkcell places on a supplier. Cüneyt Türktan cites Cyprus as an example of how Ericsson lives up to this requirement. Ericsson began building Turkcell's network, which covers the Turkish portion of the island, in mid-June, and the system, comprising 70 base stations and a switch, was taken into operation at the end of July.

"The partnership with Ericsson involves so much more than product deliveries," says

Cüneyt Türktan, naming as examples a training center in Istanbul, the financial support arranged by Ericsson through the Swedish Export Financing Council and the benefits that Turkcell has derived from Ericsson's global experience.

### New organization under development

Cüneyt Türktan also talks about the future and emphasizes the importance of the service that Ericsson provides and the support for new technology. Turkcell is preparing for the New Telecoms World with a new organization in which there will be independent units for multimedia, voice and data, as well as video services.

"The future is just around the corner, and with Turkcell we are conducting projects for high speed data, for example. Other important steps towards third-generation mobile telephone systems are GPRS, which may be launched next year, and Edge the year after," concludes Sören Ahlstedt.

Gunilla Tamm  
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## Important wireless Internet order from Turkcell

The Turkish mobile telephone operator Turkcell will be the first in the world to install Ericsson's new wireless Internet product and service program. It will allow the operator to offer up to ten times higher data speeds in its GSM network.

Ericsson's WISE High Speed Internet Solution package combines a number of Ericsson products and services for GSM networks with Internet technology. Among other things, this will allow companies to equip their employees with mobile telephones and computers to have mobile access to their office. By offering new fast mobile data services, the operator will also increase the utilization of its network.

"This solution makes it possible for GSM users to gain access to real-time based information and new entertainment services. It's common that web sites have sound and video files (streaming media), for example. These services typically require more rapid data

transmission speeds than what traditional GSM data calling can offer through a time slot," says Fadi Pharaon, marketing and sales manager for wireless Internet at Ericsson Radio Systems.

The mobile data package High Speed Internet is based on the circuit-switched technology HSCSD (High Speed Circuit Switched Data). The technology is especially appropriate for real-time transmissions and allows data transmission speeds of up to 38.4 kilobits per second by making use of several time slots for each data call. Combined with compression techniques and filters, such as Ericsson's WebOnAir Filter Proxy, mobile data speeds for downloading services can be further increased.

Another improvement for data traffic occurs with IAS (Integrated Access System). It allows connections to be made directly from a Mobile Switching Center (MSC) to the Internet and other packet-switched networks. Using HDLC (High-level Data Link Control) Encapsulation, data transmission speeds can

be increased by 25 percent in an ISDN network.

The new mobile data package will be installed in Turkcell's network this autumn.

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### ERICSSON IN TURKEY

Ericsson Telekomunikasyon was formed in 1986 when Ericsson received its first major network construction assignment in Turkey. Now it is mobile telephony, GSM, which dominates, with systems equipment accounting for 70 percent and phones for 24 percent of Ericsson's sales.

Ersin Pamuksüter is president of Ericsson Telekomunikasyon, which has around 550 employees.

Ericsson is not a real newcomer in Turkey.

As early as the beginning of this century, supplies were sent to the country's leader at that time, the Sultan. In autumn 1928, the automatic phone switch was brought into operation in Smyrna, which is now Izmir.

Ericsson became sole supplier to the Turkish company PTT and was a well-known company within telecom circles. The company enjoyed almost total dominance until 1967, when Netas (Nortel) entered the market and Ericsson was knocked out.



## NOTEWORTHY

### Housing aid for kids in need

► Ericsson Telecomunicações in Portugal recently sponsored a beach soccer match in the Algarve. The match attracted a large crowd and received a great deal of publicity in the Portuguese daily newspapers, thanks largely to the star-studded lineup of one of the teams. Some of Portugal's most famous soccer players participated including Luís Figo, Simão Sabrosa, Sá Pinto and Rui Correia.

The proceeds raised by the soccer match were donated to emergency housing for children in Loulé, near the Algarve. In addition to sponsoring the actual soccer match, Ericsson made a direct donation of one million Portuguese escudos for emergency housing.



Olle Hellström of Ericsson guided the King and Queen through the company's premises in Sundbyberg.

Photo: Lars Åström

### A royal visit to Sundbyberg

► The King and Queen of Sweden visited Sundbyberg, in the north of Stockholm, on Thursday, September 2. Amongst other stops for the Royal Couple was a brief inspection of Ericsson's premises located in Sundbyberg.

The site is seen as an example of property development in the area; the premises were formerly a chocolate factory but have now been transformed into a modern, practical office development.

The couple paid particular interest to the history and photography surrounding the premises, which were completed in 1997. Today, office-space for 850 people exists.



Ericsson's CEO Lars Ramqvist met with President of Tanzania Mr. Benjamin W. Mkapa on September 2nd.

Photo: Lars Åström

### Visit by President of Tanzania

► Ericsson received a visit to its Head Office, Stockholm, from the President of Tanzania, Mr. Benjamin W. Mkapa on September 2. Having requested a visit to Ericsson, while on an official tour of Sweden, the President was received by Ericsson's CEO, Lars Ramqvist.

Following a presentation of the Ericsson Group and its role in Tanzania, the future and the privatisation of telecommunications in Tanzania were discussed by the assemblage.

# GSM Systems in Sweden targeting knowledge

"The Knowledge Step" is the name of the training program that GSM Systems in Sweden is carrying out in 1999. When the program is complete, 3,700 employees will have increased their knowledge of data communications and the Internet.

At the beginning of the year, the GSM Systems executive team decided that knowledge of data communications is part of the strategic competence that will be essential when telecom and datacom converge. As a telecom company, it is important for Ericsson to build up its expertise to avoid being outrun by data communications companies that are rapidly equipping themselves with telecom expertise.

#### Smorgasbord of courses

"We have prepared a smorgasbord of courses and seminars to suit all. The requirement is that every employee must take a step forward, by taking courses or participating in seminars," explains Cristel Ehrenkrona at the human resources department of GSM Systems, the overall coordinator of the training project.

The goal is to have all employees within GSM Systems in Sweden complete the Knowledge Step

during 1999. This involves 3,700 employees, most of them based in Kista and Sundbyberg in Stockholm. To cope with all the registrations, Ericsson Business Consulting has further developed a Web-based registration system and a solution that is also appropriate for the entire company.

#### Levels for everyone

Cristel Ehrenkrona explains that the employees themselves compile their own training programs, choosing from courses on CD-Rom, hands-on Internet courses and seminars. There are levels to suit everyone, from complete beginners to experienced technicians.

Those so inclined can also choose distance learning courses given by the Royal Institute of Technology, KTH, or the University College in Örebro in central Sweden. Employees who complete higher-level training may be eligible for certification.

"By running campaigns at every unit, we have created extra interest in participating in the Knowledge Step. When everyone at a unit is taking part in the training program, there is the added benefit of being able to talk about the courses and seminars with colleagues," explains Cristel Ehrenkrona. "To provide support and follow-up, we have also appointed coaches and provided special training for them."



Cristel Ehrenkrona

The Knowledge Step concept was developed by Ericsson Research with Hans Nihlén as project leader. This is also the unit that supplies all training, involving both internal and external instructors.

Gunilla Tamm

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http://knowledgestep.ericsson.se

## Ericsson's best golfer

A record number of enthusiastic Ericsson golfers gathered on the Swedish island of Gotland at the end of August to determine the winner of the 1999 company champion title at the Kronholmen Golf Course.

A total of 300 people entered in five different categories. The weather both before and during the tournament was mixed, bringing everything from rain and biting wind to sun and heat.

Norwegian Joakim Aslaksen, from Ericsson in Norway, won the men's open category.

He now holds the title of Company Champion 1999.

In the women's category, it was Kristin Joelson from Sweden who became Company Champion after two days of very consistent playing.

Honors also go to Carl-Inge Larsson who hit a hole-in-one on the 14th hole.

Mats Borgström



Per-Ingvar Berglund (above) and Per Nilsson (right), both of Sweden, on the 17th hole.



## ERIC & SON





# 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 an email to [Imejobs@ericsson.se](mailto:Imejobs@ericsson.se)

Contact No. 14 1999

Updated September 6

### ERICSSON RADIO SYSTEMS AB, TELEFONPLAN

#### Manager Internal Communications

Established in June 1999, Ericsson Services is the new name for service excellence within Ericsson, a Business Unit in the Network Operators & Service Providers (NOSP) segment.

Ericsson Services combines the best elements of NOSP's service unit network to create a single focused organization. The result - a dynamic resource which aims to build on our impressive sales growth and maximize business opportunities well into the new millennium.

● Reporting directly to the Head of Ericsson Services and working closely with the Marketing Communications Manager, you will quickly establish yourself as a key person in our global network.

You will bring your natural enthusiasm, motivation and confidence to a lively Communications team responsible for the full range of Internal, External and Marketing Communications.

In this exciting and pressurized role you will assist Ericsson Services management in gathering a diverse range of information and communicating it to highly targeted audiences throughout the organization.

You will also represent us at the Network Operator Segment Internal Communication Council and on the editorial Board of Ericsson internal publications.

To succeed you should have relevant qualifications and experience and be fluent in English. We also expect you to be a skilled writer and producer of Powerpoint presentation material and to have a flair for organizing internal events and roadshows. This is your opportunity to define and develop your own role in a new organization - now convince us you can do it.

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### ERICSSON BUSINESS NETWORKS AB, NACKA STRAND

#### Strategic Pricing

Business Unit Enterprise Systems The Business Unit Enterprise Systems in Nacka Strand develop, sell, and support communication solutions to a broad spectrum of customers from smaller companies located in a single site to multinational companies with offices connected in global networks. Our solutions cover everything from regular telephony to advanced data communication.

The unit Strategic Pricing is responsible for driving the licensing and pricing strategies for the direct channel within Enterprise Systems. The Strategic Pricing unit is also in charge of the pricing flow from PU through BU to our Market units within the direct channel.

● For the Strategic Pricing unit we are now looking for 2 persons to fill the gap for people going to other units.

The objectives and main tasks are to be a part of a small team with the focus of being a part of business planning regarding license and pricing strategies securing a logical and transparent pricing information process and administration from PU through our Direct Channel to our local companies being part of education in development projects and sales regarding licensing and value based pricing being responsible for driving an Enterprise segment Pricing Forum.

You should have a Degree in Business Administration or equivalent. As working in the pricing group you need to enjoy working both with numbers and people.

Personal skills required are customer orientation, a thorough and methodical approach to work and to be able to work as a team member. The work includes some travelling. Good knowledge in English is a must as your contacts are all over the world.

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### ERICSSON RADIO SYSTEMS AB, KISTA

Are you fascinated by questions related to the future? Do you like action? Are you inspired by technology with a focus on the end-user and how technology can increase the quality of life? Are you result oriented? Then we would like you to join us in the most exciting high-tech project on earth!

#### Strategic Planning

● The unit is expanding and is looking for: 2 Market Analysts - with a background in market forecasting or Business Intelligence, having a good understanding of Ericsson's and our customers business needs.

The Market Analyst is responsible for the handling, processing and distribution of market data and competitor information within the unit. The Market Analyst also provides the team with up to date forecast information for the ESP.

Desirable qualities in the successful candidate: Analytical skills, dynamic mindset, University Degree, preferably M.Sc, research and analysis experience, fluent in English, excellent presentation skills.

For one of these positions we are requiring, besides above, a candidate with excellent technology expertise (WCDMA and IP mainly).

#### Project Manager

● we need a person that helps us facilitating the ESP-process. Holding the ESP-process and ensuring the active participation of key stake holders in the Ericsson group is of key importance for us to achieve our wanted position.

This is a dynamic position requiring from the candidate, besides the requirements above for our market analysts, following: good skills in holding workshops, preferably a good network within Ericsson, skills and interest in working with scenarios.

This position gives the successful candidate an outstanding possibility to enhance his/her network within Ericsson and selected customers.

**Contact:** Heraldo Sales Cavalcante, +46 8 404 74 99, [heraldo.sales-cavalcante@era.ericsson.se](mailto:heraldo.sales-cavalcante@era.ericsson.se). Application: Catch the train to the 3rd Generation!, Ericsson Radio Systems AB, KI/ERA/LI/HA, 164 80 Stockholm, [lise-lotte.ramneby@era.ericsson.se](mailto:lise-lotte.ramneby@era.ericsson.se).

### ERICSSON RADIO SYSTEMS AB, SUNDBYBERG

#### Business Manager Australia and Taiwan

Ericsson Radio Systems AB, Sundbyberg - SG/ERA/LO Business Management Middle East and Asia-Pacific ERA/LO is responsible for business operations for products based on GSM, NMT and TACS standards.

We are now looking for a Business Manager responsible for one or several accounts in Australia and Taiwan.

● As a Business Manager (BM) you are the BMOG ambassador with the overall responsibility to supervise and support the Local Company (KAM) in

achieving the goals and objectives as set up by BMOG Mgmt.

The BM should also represent the Local Company towards other Ericsson units to give good attention and priority for the market.

Major tasks are: Develop and follow-up business strategies and Account plans together with the Local Company (KAM). Support and Coordinate the local company Marketing and Sales activities. Promote BMOG's applications, services and products. Build relations in the local company and establish good awareness for the market in other units within Ericsson.

We are looking for a Business oriented person with wide experiences in market & operations of GSM infrastructure projects.

You should be flexible and able to prioritize on a very wide range of high level tasks, which are related to this role.

**Contact:** Khalid Qureshi, Tel. +46 8 585 305 25, [khalid.queshi@era.ericsson.se](mailto:khalid.queshi@era.ericsson.se), Eva Fransson, Human Resources, Tel. +46 8 757 57 38, [eva.fransson@era.ericsson.se](mailto:eva.fransson@era.ericsson.se). Application: BUSINESS MANAGER AUSTRALIA AND TAIWAN, Ericsson Radio Systems AB, SG/ERA/LOHS Helga Holmkvist, [helga.holmkvist@ericsson.se](mailto:helga.holmkvist@ericsson.se).

### ERICSSON RADIO SYSTEMS AB, KISTA

#### System Handling Leader to San Diego

Ericsson is establishing development of an IS-95 based system, CMS11, in San Diego, California.

● One major task is defining the product structure of the new system and introducing the mystery of PRIM, GASK etc to the former Qualcomm employees, along with 1095 document structures and all other things that are required to manage a large product line.

This is not a managerial position, but requires a large portion of own initiative and an ability to make contacts and educate other people.

**Contact:** Håkan Djuphammar, +46 8 757 03 84, [hakan.djuphammar@era.ericsson.se](mailto:hakan.djuphammar@era.ericsson.se). Application: R/H1235, Ericsson Radio Systems AB R/HS, Inger Holmgren, SE-164 80 Stockholm, [ansokan.PU-WRN@era.ericsson.se](mailto:ansokan.PU-WRN@era.ericsson.se)

### ERICSSON RADIO SYSTEMS AB, KISTA

#### Product Marketing Managers in Malaysia

ERA GSM Systems Product Units BTS, BSS, CSS and PSS will locate part of our Marketing and Sales Support for China and Asia-Pacific in Kuala Lumpur, Malaysia. Our goal is to enhance sales by giving expertise support to the Market Units in the same time zone and region.

● The positions, which are long-term (1 year) contracts, are open for individuals fulfilling the following qualifications: Vast experience from products and solutions and extensive contact network within the concerned Product Unit. Vast experience from customer meetings and presentations through Sales and/or Marketing of GSM products. University degree or corresponding education/training acquired through job experience. Communication skills and fluency in English. Self motivated and driving with good co-operation skills

The job includes on-site support to our Market Units in China & Asia-Pacific. Thus, extensive travelling within the region is required.

**Contact:** All positions: Per Arvidsson, +46 70 514 0872 or +46 8 404 8115, [per.arvidsson@era.ericsson.se](mailto:per.arvidsson@era.ericsson.se). BTS: Mona Benlaib, +46 070 577 2529 or +46 8 404 7621, [mona.benlaib@era.ericsson.se](mailto:mona.benlaib@era.ericsson.se). BSS: Per Arvidsson, +46 70 514 0872 or +46 8 404 8115, [per.arvidsson@era.ericsson.se](mailto:per.arvidsson@era.ericsson.se). CSS: Jo-

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### TELEFONAKTIEBOLAGET L M ERICSSON, STOCKHOLM

#### Corporate Treasury

Corporate Treasury is responsible for Group Funding and Financial Assets and Liabilities Management within the Ericsson group. Managing financial risks, setting and following up policies and guidelines regarding liquidity, currencies and customer financing.

● Corporate Treasury is now looking for a new member of the team responsible for financial asset and liability management, group funding and bank relations. You will work with a broad range of corporate treasury management and corporate finance issues on a consolidated level. Examples of the functions core activities are understanding and forecasting the outcome of the financial net and liquidity, equity hedging, funding, investment and rating analysis, interest rate and other financial risk management, capital structure considerations, implementing activities in the capital markets, treasury aspects of incentive programs etc. You will also be involved in the support of tools for bank relation evaluations, the corporate treasury scorecard and intranet communication.

The ideal candidate should as a minimum academic requirement have a Ma. Sc. major in finance, economics or equivalent, a couple of years experience related to capital markets, treasury management, finance or risk management and a good overall perspective of Ericsson. Fluency in English and skills in working with MS office applications are required. The informal environment of the small team often facing complex analytical tasks and tight deadlines puts great demands on flexibility and co-operating abilities. The function will be based in London from late September 1999.

**Contact:** Henrik Carle, +46 8 719 47 17, [henrik.carle@lme.ericsson.se](mailto:henrik.carle@lme.ericsson.se). Application: Internal job ad LME/DT, Telefonaktiebolaget L M Ericsson, HF/LME/P Maria Clewemar, S-126 25 STOCKHOLM, [maria.clewemar@lme.ericsson.se](mailto:maria.clewemar@lme.ericsson.se).

### TELEFONAKTIEBOLAGET L M ERICSSON, LME/X, STOCKHOLM

#### Senior Credit Analyst

The telecom-business is under deregulation which attracts new players whose main objectives are to generate value for its shareholders and secondly to provide telecom service. The competition among equipment suppliers in the telecom market will further increase.

The ability to identify the most viable new projects will be the key to increasing market shares. For the customer selected by the vendors, financing support may be considered.

Customer Finance has an immediate need for increasing capacity to conduct analysis of new telecom projects and thus, from a credit risk perspective, contribute to making these selections successful. The objective is to be able to make informed decisions, whereby business opportunities versus credit risk considerations are carefully balanced.

● We are now looking for a Senior Credit Analyst who will be reporting to the Head of the Credit Analyst Group. You will be joining a truly international team with 30 colleagues spread over the world. Your current base will be Stockholm but you may have short and/or long-term assignments abroad. The Credit Analyst will be working closely with the Financial Advisers within Customer Finance. He or she will also be a member of the ad hoc project teams.

Project Analysis: Analysis of customers, their sponsors, business plans and their markets in order to determine the feasibility of their proposals or business plans and to identify relevant risks. This includes financial analysis through the use of financial analysis tools as well as collection and study of market, regulatory and other information having an impact on the project.

Documentation: To participate in the documentation so the analysis and the filing are in line with the framework given in the document Credit Risk Rating Model: To secure that all necessary information is available/included when making the rating of a new transaction and that the result of the analysis is considered when such a credit rating is made.

Information: To stay well informed about trends in the telecom sector and the macro economic



development etc. Training: To participate in training of personnel in project financing/vendor financing. Support to Ericsson Credit AB/EFC: In case a customer is in a default situation or there is a high risk of future default participate in a task force set up by EFC.

We expect that the person joining our team, apart from having a personal interest in the global financial markets and in the telecom industry, also will meet the following requirements: A university degree in Business Administration, preferably specialised in financial analysis/finance or economics.

At least 5 years of qualified experience in project finance/credit analysis at a telecom company, a telecom operator or at an investment bank/commercial bank. Ericsson experience is of course an advantage. Excellent knowledge in advanced financial modelling and in the Microsoft Office package. Fluency in English both orally and in writing. Good knowledge in a second foreign language (preferably Spanish) is a merit.

We are looking for a mature person with good intercultural, diplomatic and communications skills. We also think you have the ability to combine teamwork with independent research and analysis work.

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#### TELEFONAKTIEBOLAGET L M ERICSSON, STOCKHOLM

### Dialog Survey LME/DK

Ericsson is about to launch the next generation Employee Surveys after Compass -DIALOG Survey. LME/DK is looking for a PRODUCT MANAGER, who will also be project leader for the launch and the implementation support globally. DIALOG Survey is a concept based on how to develop Ericsson and a help to understand how people make a difference - today and in the future! Please read more about DIALOG Survey at <http://www.lme.ericsson.se/lmedk/dialogsurvey/index.shtml>

● Main responsibilities: Corporate helpdesk give support and guidance regarding how to introduce the concept in the organization and how to execute the survey and improvement process, build up and maintain the user network for exchange of experience and development of the concept. Product and process development update and further develop the survey and the improvement concept, develop and maintain a global data base for survey results, follow up on the needs for training and information about Dialog Survey and initiate activities accordingly, be responsible for all corporate issues with regards to SIFO as contracts, benchmarking, research & development.

For this position we need a person whose profile meets the following requirements: Strong background in Operational Development and/or Human Resource. Good understanding of how people factors affect customer value Very good communication skills. Fluent in English. Experience from Customer Surveys is a plus.

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#### ERICSSON INC. USA

### Test Expert

● This position involves designing internetworks that consists of different LAN and WAN protocols. Develop and run tests for internet working products prior to releasing to the customer base. Candidates should have well proven internet workdesign and internet working trouble shooting skills in the following areas: TCP/IP, IPX L2TP, ISDN, PSTN, T1/E1, SMDS, ATM, DL2 Interfaces, and VoIP. Some AXE configuration experience would also be desirable. A/S, B/S in CS/CE with emphasis in networking and data communications desired or equivalent experience.

### Senior Software Designer:

● Develop and bring to market embedded data-communications products designed for the enterprise market place. This position in the Santa Barbara development center involves working closely on a small team dedicated to a new platform development.

The job requires a thorough understanding of systems engineering concepts and a talent for the embedded system environment.

Experience in C programming, Device drivers, embedded system design/development, Ethernet, WAN E1/T1, signaling protocols (ISDN, RBS, R2, etc), digital switches, TCP/IP.

Experience in MIPs CPUs, VxWorks, ATM, DSL, VoIP, DSP (MF, DTMF) is desirable.

### Software Designer

● The ideal candidate will have a minimum of five years programming experience, along with an MS/CS degree or equivalent. Additional experience should include some combination of: A knowledge of routing protocols, embedded real-time applications, distributed and fault-tolerant Algorithms, voice over packet technologies, ATM Signaling, ISDN signaling (Q.931 and all other variants for North America, Europe, Asia and Australia). Excellent oral and written communications skills. Embedded Systems development using GNU tools, preferably in a VxWorks Environment. Familiarity with performance evaluation and tuning of real-time applications using logic analysis and other data collection and measurement tools, as well as driver development for state of the art communication devices.

### Associate Software Engineer - Carrier Products Group

● This would be your first introduction to the newest technology in the telecom industry. You will develop drivers for fore new high-speed internetworking devices as well as work on higher levels of tward such as signaling protocols for advanced voice and data applications. Entry level position. BS/MS CS/EE.

### Software Engineer - Carrier Products Group

● If you have experience in the telecommunications industry, you will be challenged in this position to define and develop software for our leading-edge carrier-class products. Work as a part of a team of top-notch H/W and S/W developers on the current and next generation Network Access Server. BS/CS/EE MS/CS/EE. 2-5 years of relevant experienced required.

### Technical Support Engineer

● Working as part of our ACCESS Product Unit Technical Support Team, the ideal candidate will possess a strong knowledge of routing technologies including TCP/IP, IPX, SNA, X.21, ISDN. 3+years experience in internetworking and a CS/EE required. You will provide third line technical support, assist with problem duplication and rectification, life management, critical account management and new feature technical writing. There will be the opportunity to assist regional sales engineers with presentations and evaluations. Knowledge of other languages preferred.

### Hardware Engineer - Hardware Sustaining Group

● This individual will be responsible for designing, developing, modifying and evaluating electronic parts, components or integrated circuitry for electronic equipment and other hardware systems. Determines design approaches and parameters. Analyzes equipment to establish operating data, conducts experimental tests and evaluates results. Selects components and equipment based on analysis of specifications and reliability. May also review vendor capability to support development. This position requires a strong working knowledge of hardware components and concepts, as well as high-level systems and applications support and troubleshooting. Requires BS/EE degree or equivalent experience in the design of equipment, components or circuitry.

### Diagnostics Software Engineer

● You will develop hardware diagnostics software and perform testing. Also you will do bug verification, write utilities and scripts, and analyze tools. BS/EE degree. Relevant related experience of 4-5 years.

### Network Installation Engineer

● For this position you will need to be thoroughly versed in TCP/IP and LAN/WAN protocols. You will deal with customers directly while you enjoy traveling internationally 50% of the time. A BS/CS or BS/EE desirable or equivalent experience.

### Product Manager

● Here is your opportunity to be on the leading edge of technology while living in one of the best places on earth. Affordable housing, no smog, no traffic, and no crime. You will introduce and promote our state-of-the-art products in WAN access both domestically and internationally. BS/EE degree with strong engineering background with a minimum of 2 years experience in product management required. Extensive travel required. Good presentation skills necessary. If you are a sales or technical engineer working in remote access, apply now.

**Contact/Application:** Susan M. Cochrane, Staffing Manager, cochrane@acc.com, EUDEXCO@am1.ericsson.se, fax +1 805 961 0214.

#### LM ERICSSON LIMITED, IRELAND

The Software Center (SWC) is part of a programme within ETX Wireline Systems (formerly Public Networks) to rationalise the handling of AXE software deliveries to our customers. The center builds, verifies and delivers the Market Application Systems to Wireline Systems customers globally and performs verification upgrading of the Global Application Systems. The center is located in Beech Hill, Clonskeagh, Dublin 4, Ireland.

### AXE Testers & Trouble Shooters

● We are seeking a number of AXE Testers and Trouble Shooters to supplement our existing staff. Applicants should have at least 4 years experience in AXE 10 software verification or support. Customer focus will be an important attribute of the Software Center. Ideally, the experience will have been gained in an environment involving regular contact with end customers.

The duties will include: Software verification of Global and Market Application Systems. Design and verification of GAS/MAS Upgrades. MAS roll-out support. Global Application System Maintenance. Global Application System / Market Application System information publishing, and development of the Software Center's automated testing capability.

The Software Center represents a unique opportunity to work on AXE software from the latter stages of the Design phase, through market customisation and rollout and into the support phase.

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

Applications marked Ref: LMI/HR/R-99:0026, for this position should be sent in writing attaching a current Curriculum Vitae to the undersigned.

### Section Manager Verification Methods & Tools

● We are seeking a person to setup and lead a section, which will develop the verification methods and tools used by the Software Center.

The section will re-appraise AXE software verification methods, investigating the effectiveness of verification. The section will propose and implement alternative verification methods, which may include automated testing, improvements in the verification environment, process improvement, use of simulators, development of testing tools, etc.

Applicants should have at least 5 years experience gained in AXE software verification. Ideally, applicants will also have knowledge of software verification from the broader software industry. The position entails dealing with the representatives of end customers and Ericsson local companies. The successful candidate will have excellent communication and interpersonal skills teamed with the ability to effectively manage projects. Self-motivated as a team member and promote team working skills through the use of motivation, enthusiasm and drive.

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

Applications marked with Ref: LMI/HR/R-99:0026 for this position should be sent in writing attaching a current Curriculum Vitae to the undersigned.

### Operations Support & Development Manager

● We are seeking a person to lead a unit which provides key support services to the Supply unit and to the Maintenance unit. The support services

include Resource Management & Planning, Process Definition, Methods & Tools, Information Publishing, Competence Development, Facilities & Administration. The position reports directly to the General Manager, Software Center.

Applicants should have at least 5 years experience gained in an operations environment dealing with AXE software verification, supply or support. Ideally, applicants should have knowledge of software verification from the broader software industry. Experience gained in an operations environment with a telecommunications operator would be a distinct advantage.

The ideal candidate will have a degree in Electronic Engineering. A balanced combination of personable communications skills, technical appreciation and drive will provide us with the individual we seek. A willingness to travel internationally is important.

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

Applications marked with Ref: LMI/HR/R-99:0025 for this position should be sent in writing attaching a current Curriculum Vitae to the undersigned.

**Application:** Margaret Gaffney, Recruitment Executive Manager, LM Ericsson Limited, Beech Hill, Clonskeagh, Dublin 4, email: lme.lmimgy@eei.ericsson.se

#### ERICSSON UTVECKLING AB

### Design of the CPU in the CPU

Ericsson Utvecklings AB has total responsibility for the continuing development of AXE as a core platform. Design, development and production is mainly performed at company units in Stockholm and Östersund but also in a number of Ericsson design centers around the world.

The AXE control system consist of a number of processors. They are working together to gain high traffic handling capacity and reliability. Perhaps the most critical component in the system is the custom designed central processor, internally controlled by the so called micro program.

● Ongoing and future assignments in this area of very HW-related and realtime oriented micro programs (MW, Micro-Ware) needs. You to develop functions in current processors and development of next generation processors in the high-end capacity range.

The positions covers technical both team/project leading and design work, from idea to on site operation. We are also developing the specific design environment, interface and assemblers, specific for the operation. Depending on your current and evolving knowledge you will be able to work with various things within the area.

Planning, structuring and performing the design work together with a large number of computer architecture enthusiasts is a relevant description of our situation. The operation is unique within the company and the products we design are very attractive which gives us high attention.

The implementation work often includes profiling the programs to get a minimum of execution time. One could say this is one of the leading stars in this work. Another is to add and maintain reliability functions in the system. These requirements together with structured solutions is a real challenge.

For the team/project leading you should have an interest in how to form, plan, and follow the design work. You should also develop or have a technical understanding of the work and product and have a strong feeling for the end result.

Experience in general programming and structuring plus familiarity with machine language coding, is a good starting point. An analytic mind and ability to change perspective in both the technical and operational worlds will make it possible for you to fit very well with us.

If You feel the above description match a situation You would like to go towards, contact us for a discussion of where You would like to start !!!

**Contact:** Chef Ove Ohlin: ph +46 8 727 27 79, ove.ohlin@uab.ericsson.se Personalavd. PG Måsson: ph +46 8 727 32 61, per-goran.mansson@uab.ericsson.se. Application: Ericsson Utvecklings AB, Att: Birgitta Friis Box 1505 S-125 25 Älvsjö SWEDEN Email: birgitta.friis@uab.ericsson.se

#### ERICSSON COMMUNICATIONS CANADA, MONTREAL (LMC)

### APZ Support Engineer (TDMA Systems)

● We require a self motivated person, with in depth knowledge of Trouble shooting methods as well as the ability to perform technical investiga-



# Don't miss the opportunity of playing in a new Ericsson international challenge!

Ericsson Mobile Communication AB develops, manufactures and sells mobile phones world-wide. According to market studies of the mobile telecommunications industry, the TELEMETRY and AUTOMOTIVE environments, with mobile machine-to-machine communications, will surpass 90 million MODULES units within the next couple of years.

Ericsson is present in this environment throughout its Global Product Unit MODULES, which has its headquarters in Bilbao (Spain) and presence in USA, with responsibility for sales world-wide.

If you:

- Are an entrepreneurial sales person, with strong drive, strong customer orientation and results focus.
- Have experience in selling business-to-business solutions, especially in the alarm, vending machines, security and meter reading sectors, or extensive experience in product management and marketing/communication activities in these areas.
- Have experience in selling to System Integrators, System Developers and/or Operators in the telecommunication environment.
- Have experience in international negotiations and in establishing strategic partnership agreements.
- Are fluent in English and available for frequent international travel, then you are one of the people who we are looking for.

If you are not scared of assuming new challenges, Ericsson offers you the possibility to join a young, enthusiastic and highly qualified team. The work involves international sales responsibility in a very professional, business-to-business environment. The technology, products/solutions and people involved are, as part of Ericsson, leading-edge. Incorporation is immediate. Personal development and career plans are part of our usual processes.

Ericsson Product Unit Modules located in Spain and USA offers you the following positions:

## **Key Account Managers – Telemetry** (Ref.: 01)

The sales force is vital to contribute to the leadership market position in telemetry modules. Reporting to Sales Telemetry Director and working in the identification and development of new sales opportunities, you will be responsible for direct sales to one or more segments (alarms, vending machines, meter reading, etc...) or a geographical region. Monitoring customers' accounts, their competitive position and evolution in the business, adapting our offers and strategy. Co-operation in forecasting, volume planning, as well as sales budgeting will be required as well.

The job requires good technical communication skills, high energy and strong performance in order to be able to open and develop new markets and accounts; thus, you should have documented sales experience and a proven sales record of System selling or within Telecom and/or Datacom Industry. This position is located in Bilbao (Spain) and in Raley (USA).

## **Manager Product Line Modules** (Ref.: 02)

The responsibility of this Product Management Unit is global, covering modules for all standards and all applications. Reporting to PU General Manager and being responsible for the total Product Portfolio Ownership and Profit & Loss A., you will assume the challenge of defining and implementing strategies for a profitable and competitive product portfolio, monitoring new market trends, competitors' behavior and initiating new product development activities and projects. Besides, you will be the person responsible of securing resources and competence in the Unit.

The job requires extensive experience in Product Management, good technical knowledge in the area, well-developed strategic and analytical skills and experience in people/competence management. This position is located in Bilbao (Spain).

## **Global Product Manager (GSM and American Stds)** (Ref.: 03)

The Global Product Management function shall ensure that our customers perceive Ericsson as the leading supplier of modules. Reporting to Manager Product Line Modules, you will be responsible for managing competitive and profitable GSM or A. Stds modules portfolio, analyzing competitors' behavior, market & business trends. You will be involved in the definition of the strategic positioning of the GSM or A. Stds modules, establishing product roadmaps and release plans, and will assume the definition of product requirement specifications and follow-up until phase out.

The job requires good technical knowledge in the area and experience in Product Management from Telecom and/or Datacom Industry. This position is located in Bilbao (Spain) and in Raley (USA).

## **Technical Product Manager (GSM and American Stds)** (Ref.: 04)

In this position you will be involved in the product development projects where you will actively represent Product Management. Your main responsibilities will be to develop and define Product Requirement Specification from a technical perspective as well as from the customers' point of view. But you will also to manage and monitor the achievement of technical goals from a customer's perspective – that are settled for a specific product/customer, and will be the interface concerning all technical matters between the customer and product development during product development projects.

The job requires experience in Product Management as well as in engineering within Telecom and/or Datacom Industry, with good technical knowledge in this area. This position is located in Bilbao (Spain) and in Raley (USA).

## **Project Manager – GSM Modules** (Ref.: 05)

You will act as main Project Manager of a GSM module from specification to final product. Your main responsibilities will be to conduct the feasibility study and evaluate all technical and financial options, interfacing with the customer. You will assume the cross-functional team set-up, monitoring the fulfilment of time, cost and quality goals, and will co-ordinate all activities for R&D, industrialization, product management and after sales.

The job requires energy and drive, team building and experience in global management in GSM Telecom and/or Datacom projects. This position is located in Bilbao (Spain).

## **Marketing Communication Manager** (Ref.: 06)

The Marketing Communication function will help build the awareness of Ericsson as a leading supplier of machine to machine communication. Your responsibilities include media activities, press contacts/press releases across many countries, marketing communication material, exhibitions and the marketing communication budget.

The job requires excellent negotiation and communication skills, as there will be many interfaces both within and outside of Ericsson. You should have experience from marketing in an international environment and working with agencies, media suppliers, press, etc... in relation with the Telecommunication and/or Datacom Industry. This position is located in Bilbao (Spain).

## **Manager Customer Service and Support** (Ref.: 07)

The Customer Service function shall ensure that our customers perceive Ericsson as leading supplier of services and support within the wireless industry. Reporting to the Marketing Director, your responsibilities include developing and maintaining a Customer Service structure that meets our customers demands and increases satisfaction at a reasonable cost level. This includes implementing and continuously improving concepts covering repairs/swaps, warranty, policies, help desk and training within stated budget levels.

The job requires good communication and negotiation skills, as there will be many interfaces both within and outside of Ericsson. You should have experience from customer services in an international environment and from the Data/Modem or Telecommunications Industry. This position is located in Bilbao (Spain).

## **Web, Marketing and Sales Manager** (Ref.: 08)

Sales through Internet to smaller customers will complement our normal sales and help contribute to increased profitability and market share. Your responsibilities include developing and implementing a system enabling sales via Internet, and to reach sales targets. It also includes the responsibility to continuously improve the logistics flow to ensure customer satisfaction and low costs.

The job requires a sales and customer oriented person, with experience in sales preferably with Internet based solutions within Data/Modem or Telecommunications Industry. This position is located in Bilbao (Spain)

## **Market Research Manager** (Ref.: 09)

Accurate and fast business intelligence is vital for the PU to succeed in an increasingly competitive environment. Reporting to the Marketing Director, among your responsibilities will be to supply management with business information, developing and improving market research activities addressing market development and trends, customer requirements, product features and competition. The function will also be heavily involved in and execute Ericsson Strategic Planning for the Product Unit Modules.

The job requires experience in marketing and/or market research-analysar within Data/Modem or Telecommunications Industry. This position is located in Bilbao (Spain).

## **Product and Sales Support Manager** (Ref.: 10)

The Product and Sales support function's main objective is to explain the features of our products in a structured, user-friendly and sales-oriented manner supporting our products and sales with professional documentation. Reporting to the Marketing Director, your responsibilities include producing product information (technical specifications, catalogues, development kits) as well as training and presentation material. The position will also produce educational material for our customers.

You have excellent communication skills and you have an understanding for and are experienced in documenting technical features, specifications and benefits. Preferably you have a similar position today working for a vendor of technical products or the Data/Modem or Telecommunications Industry. This position is located in Bilbao (Spain) and in Raley (USA).

**If you want to be part of this group contact us, please send as soon as possible your CV with reference written in English to Daniel Micolta, Human Resources Manager in Ericsson Spain SA, Global Mobile Terminal Modules (Bilbao), e-mail: daniel.micolta@ine.ericsson.se**



## Make yourself heard

**ERICSSON** 



tions into all aspects of APZ Software/Hardware problems in the CP/RP/EMRP.

The candidate must have proven ability in Test System, CPT and System Stoppage Handling. It will be necessary to Handle ongoing Trouble Reports, therefore Knowledge of MHS would be an advantage.

The position will take the form of a Two Year Long Term contract and will be based in Montreal, although some travel will be required as well as pager rotation and interwork with other Support groups within LMC. It is essential that the candidate be fluent in English. If you possess the above characteristics and have the ability to Communicate with tact and diplomacy, then please contact the following persons.

**Contact:** Georges Pappas, georges.paul.rogerde@ex1.edb.ericsson.se or Adrian Gilli, adrian.gilli@lmc.ericsson.se.

## Strategic Development – Wireless Internet

● Job Requirements: Five - six years experience developing marketing strategies and plans. Two-three years experience completing business analysis and developing business plans. An MBA or other business degree, or equivalent experience. Strong background in Wireless Data/IP/Cellular Systems is required. A history of product management and/or product development would be key. Expert skills in managing complex, multi-functional processes. Strong initiative-able to proactively manage long cycle processes through roadblocks. Strong business sense and analytical ability.

Job Description: The purpose of the function is to initially perform an in depth market analysis from Wireless Internet in Canada, to define and communicate strategic product messages to external and internal customers. The function will be responsible for defining and planning strategic business development opportunities and for bringing the identified opportunity to an execution phase.

This individual will ultimately manage the marketing mix for existing products, additions to a product portfolio, the marketplace performance of a product portfolio through the product life cycle, from market assessment and strategy development to product and marketing plan execution and the monitoring of financial results. This function orchestrates the product processes through one or more customer account groups.

**Contact:** Mark Henderson, General Manager Business Strategy, 5255 Satellite Drive, Mississauga, Ontario, Canada L4W 5E3, phone: 905.629.6700, fax: 905.629.6701

## ERICSSON GMBH, DUSSELDORF

### Product Manager (Area Responsible – Radio Network Solutions

● This jobs represents the vital link between the product organisation of both our customers and the company's headquarters in Sweden. It offers a challenging opportunity for a person with ability to lead, support and facilitate the development of a group of experienced engineers and ensure the effective performance as a motivated and empowered team. This position requires a good technical background and a customer-orientated thinking as the person will have direct contact to our customers daily.

Responsibilities will be broad and varied. The Product Management Task is not just limited to support of existing products but also includes the introduction of new products.

Another task will be acquiring new customers in a highly competitive market situation, predominantly by supporting tender activities for mobile communication systems. The product area deals with future developments in the Ericsson Radio Network Solution (RNS) area, e.g. GSM evolution and third generation mobile systems to mention but a few of the highly interesting and innovative projects.

Currently, the RNS Product Area consists of a young team of seven people. Travelling will be required from time to time, on average once a month.

The ideal candidate for this position will have an engineering degree in telecommunications with at least six years of experience in the Mobile Telecommunications field. Fluency in English is essential, good knowledge of German desirable.

**Contact:** Manager Product Management, Joerg Hesse, tel. +492115341337, e-Mail: Joerg.Hesse@ericsson.com, HR Manager Hans-Jurgen Vratz, tel: +49.211.534.1441. Application: ERICSSON GmbH, Att. (EDD/D) Joerg Hesse Tel: +49 211 534 1337, Fritz-Vomfelde-Strasse 26, Fax: +49 211 534 1248, 40547 Duesseldorf, Mobile: +49 172 240

2393, GERMANY, e-Mail: Joerg.Hesse@ericsson.com

## ERICSSON AG. SWITZERLAND

*Ericsson is a leading international concern in telecommunications and employs over 100,000 staff in 140 countries, including 350 employees in Switzerland. Ericsson has made a name for itself worldwide with innovations, forward-looking technologies and customer-oriented solutions in the voice and data spheres.*

*Intelligent Network (IN) technology is changing the face of modern communications. We have already supplied IN platforms and various services to our customers. We are now seeking additional*

### Designer/Testers for Intelligent Network Services

● You should have a degree level education. We are looking for both people with experience of IN service development and recent graduates. In either case you will be expected to make a significant contribution in a team whose responsibilities are:

Carry out a feasibility study for the new service based on the customer's Requirements. Design and Implement the service. Test the service in simulated and target environments. Provide maintenance support after delivery

Future services will rely heavily on interfaces to external databases and TCP/IP and Internet, so additional experience in this area will be welcome. We also need a

Java Programmer / GUI Designer for Intelligent Network Services

You will need a university education and experience in Java programming, preferably in a telecom environment. Knowledge of Unix is also necessary.

For all positions good English is essential. Knowledge of German is a plus. Some foreign travel will be necessary. Please note that this position is in Bern and only local contracts are possible.

**Contact:** Paul Hulbert on +41 79 300 7112, email Paul.Hulbert@eas.ericsson.se. Application: Ericsson AG Frau E. Ledermüller, Ruchstuckstrasse 21, 8306 Brüttisellen, Switzerland

### Business Manager, Wireline Switching

● Job Requirements: Five to six year experience developing marketing strategies and plans. Two - three years experience completing business analysis and developing business plans. An MBA or other business degree, or equivalent experience. Technical background on Wireline Switching, specially in International Switching. Expert skills in managing complex multi-functional processes. Strong initiative. Strong business sense and analytical ability.

Job Description: P&L Responsibility for Wireline Switching Products (specifically international switching products) towards Canadian market. Monitors market place performance and financial results of Wireline Switching Products, including profitability and delivery of customer needs. Support EMC Sales teams by providing customized business solutions/responses to customer requirements.

Will work with Contract Managers and Account Managers to address Ericsson Sales Business Units needs. Will secure Product Management support for Canadian opportunities from Ericsson Wireline Switching Product Units. Business interface with Ericsson product units.

Responsible to communicate Canadian market opportunities, market developments, and pricing levels to product units. Secures from product units up to date information on product pricing, cost and margins.

Provide product portfolio business cases both general and for the Canadian market.

Main responsible to create and maintain product business plans for the Canadian market. Deliver presentations with a focus on business cases for potential applications and solutions to customers and/or presents/speaks in sales and marketing forums, trade shows, seminars or workshops. Participate actively in tenders. Responsible for providing pricing and P&L responsibility for the product towards EMC.

Main player on contract negotiations representing the product side. Product life-cycle management for the Canadian market: launch, pricing, presentations and retirement. Work with Marketing (Business Strategy), Service Solutions and Product Managers to drive product life-cycle events.

**Contact:** Luis Blanco-Alonso, Director, Fixed Networks Solutions, Ericsson Communications Canada,

5255 Satellite Drive, Mississauga, Ontario, Canada L4W 5E3, Tel: 1-905-629-6700, Fax: 1-905-629-6701.

## ERICSSON EUROLAB DEUTSCHLAND GMBH

*The new international CAPC organization currently encompasses 20 design centers with the overall responsibility allocated at Ericsson Eurolab (EED) in Herzogenrath-Aachen, in Germany. A total of 1.900 employees worldwide are responsible for the development of Transit & Network Access applications. CAPC serves the Product Units for GSM, PDC, TDMA, NMT and all Fixed Local and Translocal and Transgate Systems. Due to the need for new challenging projects in the Core Product Unit - Application Core we are looking for a*

### C-APC Project Manager, Feasibility, Development & Follow-up

● The C-APC project office has a dynamic group of overall project managers and administrators managing key projects at the core of all applications. These projects encompass subprojects and associated projects in Netherlands, USA, Ireland, Finland, Sweden, Norway, England, Spain, Italy, Germany, Denmark, Australia, Mexico, Croatia, Brasil and Greece covering a vast range of development areas at the leading edge of technology.

REQUIREMENTS: Bachelor of Engineering degree with specialisation in telecommunications, or equivalent. Four years work experience in technical aspects of telecommunication. Three years proven experience in project management. Good knowledge of PROPS, project planning, budgeting and management methods. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is required. Furthermore you should have strong interest in people and be willing to develop as a leader.

MAIN TASKS: Lead a large telephone system project with full responsibility for fulfillment of Ericsson's commitments to our customer. The Project Office is located at Ericsson Eurolab Deutschland in Herzogenrath. The position reports directly to EED/U/OPC, Manager of the Project Office.

**Contact:** Human Resources, EED/U/OPC, Simon Seebass, Dial: +49 2407 575 163, Mail: eed-sims@eed.ericsson.se, CAPC EED/H/R, Imo Freese, Dial: +49 2407 575 469, Mail: eediwf@eed.ericsson.se

## ERICSSON EUROLAB DEUTSCHLAND GMBH

*The CSS/GSM Operations has the overall operational responsibility for the Circuit Switching Systems in all GSM based applications. The Headquarters of the CSS/GSM Operations are located in EED Herzogenrath (Germany). Co-operating units from all over the world belong to our international organisation, e.g. selected units in Sweden, Finland, Spain, Great Britain, Italy, Greece, the United States, Australia, China and other countries. For the System & Product Management we are looking for*

### System engineers – Migrating from GSM to the Future

● We are working in the area of GSM 900, 1800, 1900 and UMTS systems. We are looking for people that want to become system architect, technical coordinator or take a leading role in the forefront of mobile telecom evolution. You directly control the next version of Ericsson's products in the mobile world market.

Suitable candidates have proven experience in one or more of the following areas: telecom/real time operating systems, ATM and IP protocols, O&M, CORBA, network management systems and middleware. In addition you are team and result oriented, take initiative and have good self motivation.

You should preferably have an interest in standardization and shaping of marketing messages to promote Ericsson's Core Network products in the area of UMTS. You should enjoy to work on an entrepreneurial basis and have the ability to set priorities right within an ever changing environment. Opportunities for travel, networking, personal and technical development are outstanding.

For these positions we require that you have 5-10 years of relevant industry experience. Please refer to the department homepage in the www for further information about the department's activities <http://www.eed.ericsson.se/services/eed-x-d/Welcom.html>.

**Contact:** Per Ljungberg, tel +49-2407-575-609, mail:eedplj@eed.ericsson.se; Frank Hundscheidt, tel +49-2407-575-223, mail:eedfrh@eed.ericsson.se; Frank Adelhardt, tel +49-2407-575-287, mail:eedfad@eed.ericsson.se; Simon Seebass, tel +49-2407-575-163, mail:eed-sims@eed.ericsson.se.

## ERICSSON LTD, UK

### Product Manager

● The Product Manager is responsible for developing product plans (medium term) and product programmes (current development activities) for the applicable SDH product areas, in order to maintain Ericsson's competitiveness in the market place. He or she provides the business sector with technical support for tenders and other marketing activities and interfaces with development groups throughout Ericsson. The product manager furthermore monitors the profitability of the product, as well as handle the product life cycle.

Key Responsibilities: The Product Manager is responsible and accountable for decisions regarding the technical direction of the products and for agreeing the technical and commercial elements of business development opportunities together with other organisations within Ericsson.

The product manager in particular has the following responsibilities: Develop product strategies and plans for specific product lines based on market requirements and trends. Maintain knowledge of developments in Transmission Systems and the market place including competitor information. Identify technical business opportunities and investigate required product evolution. Together with market and solutions organisations assess business opportunities, market values, and create business cases where appropriate. Actively support marketing of the product with general product features, unique selling points and business cases. Document product requirements in accordance with customer requirements and Ericsson's product evolution strategies. Provide support to the market and operations organisations in their business activities. Take part in regular technical review meetings with customers. Present technical information to the customer as appropriate. Act as prime technical interface towards supplier for product development, product characteristics and product financial issues

Qualifications, Experience and Knowledge: Minimum Electronic Engineering Degree or Combined Engineering/Business Administration Degree. At least 3 years in Product Management/related function.

Skills / Competencies: In-depth knowledge of SDH and/or associated products or technologies. Experience of marketing activities and customer relations. Understand specific products in the context of their market and competitors. Ability to focus on both internal and external customers and develop understanding of the issues they face in order to identify and meet their needs. Demonstrate confidence in persuading others to see the benefits of and agree to proposed ideas. Successful networker by proactively co-operating with colleagues across the organisation and in the industry.

### Senior Solutions Engineer

● Working within a team of engineers specialising in Solutions for Transport Network Systems, the Senior Solutions Engineer provides technical and engineering support within his/her specific technical areas of Transport Network Systems and provides a technical interface to projects and the customer.

The Senior Solutions Engineer possesses specific expertise in one transmission area. S/he has a customer focused approach to the development of total solutions for telecommunications operators globally.

S/he is closely involved with a variety of people from marketing, projects and product management as well as third party suppliers. Responsibility is taken for activities within the tender process requiring technical skills.

Customer contact is found at a number of points prior to the tender stage, where technical solutions are being discussed with customers, including making presentations and involvement in the project itself. The Senior Solutions Engineer takes a technical lead in customer meetings.

Key Responsibilities: Take responsibility for parts of a technical tender or bid. Take responsibility for providing the highest level of technical expertise on Network Issues. Actively contribute to business development by providing leading edge technical solutions. Provide expert support to contract management. Technically assess potential products and make appropriate recommendations. Participate in pre-studies and feasibility, when required. Monitor and capture market requirements keep an updated picture of market commitments. Monitor future development and trends of transport systems.



Keep the Manager informed of potential future projects and help to plan and manage resource requirements in terms of skills, tools and equipment.

Actively contribute to the development of technical competence within the Transport Network System in line with the changing needs of the business: eg through the transfer/secondment of personnel, use of expertise to provide on-the-job training. Actively contribute to the continuous improvement process and the ongoing development of a quality culture by, for example, changing behaviour and identifying and implementing improvements to processes and activities and encourage others to do the same.

**Qualifications, Experience and Knowledge:** Essential: Degree or equivalent in engineering related discipline. Minimum 2 years experience in telecommunications environment. Experience of implementing software and/or hardware systems.

Experience in one or more of the following areas: Transmission Networks. Data Communication and Computer Networks. Telecommunication Management. Synchronisation. System evaluation and inter working tests. Emerging technologies eg ATM/IP. Desirable: Degree in Telecommunications or Computer Science. Experience from specifying and/or designing optical networks

## NMS Solutions Engineers

● Product Unit Transport and Transport Access (PTTA/TPS/M)

Reports to: NMS Solutions Manager (PTTA/TPS/M) The NMS Solutions Engineer has expertise in particular product areas. He/she is responsible for providing technical expertise to Marketing, Product Management and customer solutions on management solutions, management systems and associated data communication networks. The engineer has responsibility for ensuring that the customers' needs are met by providing profitable, high quality solutions to meet time and cost objectives. The job also carries responsibility for keeping him/herself and colleagues with in the Solutions and Marketing teams up to date on the relevant Ericsson portfolio of products.

**Key responsibilities:** Understand fully the customers' business requirements in order to provide cost effective, high quality management solutions. Explain to the customer Ericsson's portfolio of products/systems, eg. ETNA NEM and ETNA IMA. Provide technical input to current and future bids and tender preparation, with the aim of securing future business and meet customer requirements. Give demonstrations and presentations to customers on management solutions and answer any technical queries arising out of these meetings. Explain to the customer how different products interact with each other and recommend the best solution that meets their needs. Help identify improved working practices in terms of competence and expedient delivery of solutions in response to tenders; eg. development of templates. Maintain awareness of industry standards and regulatory issues. Understand the contractual implications of interactions with the customer. Help drive business development by providing strategic technical input at solutions level. Work with marketing, product management and the customer to evaluate and plan for prospective projects. Keep people informed at all levels

**Qualifications, experience and knowledge:** Essential: Educated to degree level in computer studies/electronics or other relevant subject. At least 1 years' experience within the telecoms industry. Able to perform, support and review system investigations. Knowledge of Transmission systems (SDH/PDH/DWDM), associated management systems and datacommunications networks. Desirable: Basic knowledge of other telecommunications systems. (IP, ATM, PSTN, Data). Able to travel both within the UK and Overseas.

**Skills and Competencies:** Adapts to meet new challenges to meet present and future customer requirements. Ability to analyse complex issues and identify the most appropriate solutions. Generates and develops innovative ideas or improvements to achieve objectives. Communicates in a clear, concise and open manner. Ability to listen to others and adapt in a team environment.

**Contact/Application:** Chris Vaughan, phone +44-1403-277571. Email: chris.vaughan@etl.ericsson.se

## NIPPON ERICSSON K.K. MOBILE PHONES & TERMINALS - SC JAPAN

SC Japan, is included in the BU Japan & Satellite Standards within the Consumer Segment (SC). The organization consists today of the following units: R&D, Product Management and support functions. SC Japan has also a Joint Venture with Marubeni. The organization consists of 150 employees. Our present manager for the unit Operational Development & Environment is finalizing her 2-year contract here in Japan and we are therefore looking for her successor:

## Senior Manager Operational Development and Environmental Management

● We are looking for a person that will continue on working with building our Internal Infrastructure. We are building up our organization and need to continue to work on establishing Ericsson processes and procedures.

The main responsibilities will be: Take over the work with establishment and implementation of a highly supportive Management System as complement to the Management System of the BU. The goal is to achieve ISO 9001 certification for SC Japan in March. To be responsible for that our Environmental Management System is fully implemented and adapted in the organization. ISO certification will be performed October 1999. To establish and support the implementation of global SC processes such as TTM and TTC, Business Management and Competence Management. To represent SC Japan in applicable NRJ steering groups.

You will be reporting direct to head of SC Japan. We are looking for an Ericsson expatriate with a solid knowledge about our processes and organization. (Contract length: 1-2 year). You should also have a good network within our global organization. One of your missions will be to recruit a local Japanese successor and to transfer your knowledge to this person.

The person we are looking for should have a broad experience from several different areas, eg: development, marketing, process management, customer-support. You should also have some line- or project manager experience. A highly developed skill of working in a multi cultural environment is required.

**Contact:** Asa Jonzon (Manager Operational Development & Environment), Phone +81 3 3222 4654, Karin Enberg (HR manager), Phone +81 3 3222 4710, Kary Warnerman (Head of SC organization), Phone: +81 3 3222 3412, +46 8 757 27 14. Application: c/o H. Hiraide, hiromi.hiraide@ericsson.co.jp

## ERICSSON INC. USA

### Software Engineer

● We are looking for bright, motivated, inventive individuals with a desire to develop the technologies that will keep Ericsson on the leading edge of Telecommunications in the New Millennium.

The successful candidate will have the ability to perform software design and function test of datacom software products, including IP telephony, and Internet applications.

He or she will analyze situations and recommend actions to correct or modify software. This position will work on problems of moderate scope, assist and guide less experienced engineers and provide technical leadership to less experienced engineers.

The requirements for this position are a BS, CS, BSEE. Related, equivalent education and/or experience may be substituted for a portion or all of the degree requirements.

The level of experience required would normally be acquired through 1-2 years of related work activities.

### Software Engineer

● Global Resources is looking for an experienced engineer to perform function testing on Data Transmission Interworking (DTI) unit and new Data Communication Platform 2 (DPC2) within Data Transmission Subsystem (DTS).

The requirements for this position are an MS or BS in Computer Science or Electrical Engineering and 3 - 5 years of Ericsson design and testing, preferably with AXE. Experience with C, Assembly and Unix is required. A background in Datacom would be a big plus.

### Software Engineer (Quality Assurance)

● Global Resources is seeking a Quality Assurance Engineer to support EUS/GN projects, specifically in regards to Software Quality Assurance.

The responsibilities of this position include but are not limited to: securing of quality assurance plan, performing MS assessments, risk analyses, root-cause analyses, audits (project, organizational, process, and product), inspections, entry and exit criteria, meetings, diagnosis activities and TQM exercises.

The requirements for this position are a BS degree in CS, EE, or related discipline.

The right candidate will have knowledge/experience with the capability maturity model, operational development, continuous improvement, ES-SI and ISO. Experience with software life cycles is highly desirable. This person should be able to

demonstrate the knowledge and abilities usually attained through 3-5 years of related technical experience.

These positions are based in Richardson, Texas.

**Contact:** JP Brown, jp.brown@ericsson.com

## ERICSSON LTD, UK

### Commercial Analyst

● Key responsibilities: The Commercial Analyst will be involved in the following areas of work: pricing, business cases, market analysis, channel performance, marketing strategy initiatives.

The main responsibilities will be: Development of and ownership of comprehensive pricing schedules. Development of pricing tools. Production of and maintenance of business case models. Recording of actual results and analysis against business cases. Development and maintenance of process to define project commercial viability. Ownership of key commercial performance data which forms the base case for building the ESP, and work closely with ESP Champions to develop strategic scenarios around this base case which reflect realistic, yet challenging goals. Respond to requests for information from external market and industry analysts. Preparation and presentation of report as required.

**Qualifications / Experience:** A degree or equivalent qualification in a business related subject. A background in business or financial planning. Experience in a large matrix multi-national company. Telecomms experience desirable.

**Skills / Competencies:** First rate analytical skills. Ability to work under pressure and to demanding timescales. Ability to communicate effectively at all levels of the business, including presentations to senior management. Flexible approach and teamworker.

**Contact:** Recruiting Manager: Geoff Payne, +44-1403-277205, geoff.payne@etl.ericsson.se. Contact: Llynor Rathbone, +44 1403 277557, llynor.rathbone@etl.ericsson.se

## ERICSSON RADIO SYSTEMS AB, SUNDBYBERG, SWEDEN

### Sales & Marketing Support for the Enterprise Market

*Help us unplug the LAN! We intend to make high performance LANs Wireless, to let portable computer users remain networked while on the move within the Intranet. In addition we will provide the travelling business people with company access from public Hot Spots.*

*Wireless LAN Systems is a small and dynamic organization based in Sundbyberg. Individuals here have great possibility to influence their own work. We work in an international environment in close co-operation with research and design groups in Nurnberg and Gothenburg. Since end of 1998 we are selling WLAN products and will continue to develop, promote and sell WLAN solutions Worldwide.*

● The Marketing & Sales Support Team within Wan Systems needs a new member to strengthen the support for the enterprise market. This is an independent position where your own drive and professionalism will be directly reflected in the business result. We expect you to develop and maintain the contact network. With the market units and account teams, and to team up with this network in Promotion And Customer Contacts.

We believe you have some sales experience of datacommunication products to larger corporates in the international market. Sales experience from the enterprise segment of Ericsson is a valued advantage! Experience from sales of local area networks specifically is naturally a clear benefit.

**Contact:** Magnus Gunnarsson +46 8 404 47 93, magnus.gunnarsson@era.ericsson.se. Application: Ericsson Radio Systems AB, SG/ERA/KD/HS Mari Skoglöf, 164 80 STOCKHOLM, mari.skoglof@era.ericsson.se

## ERICSSON GMBH

*Ericsson GmbH (EDD) is headquartered in Düssel-dorf and has about 1.000 employees. For our unit Business & Company Development we are looking for a*

### Solutions Manager

● The Solutions Manager is a function within the EDD UMTS Solution Team, and closely supports the UMTS German market responsible and appropriate account responsible(s) in their marketing activities towards their respective client(s).

On a total solution level, the function is responsible: to work out solutions in the GSM/GPRS-

UMTS system level, to provide argumentation and information material, to maintain the product and service scope offered to client after definition and agreement with the account responsible, to handle RfIOs or similar inquiries, to support customer meetings with technical presentations, to support the UMTS Market communication activities with technical experience, to develop value statements for Ericsson solutions.

The function co-operates closely with the support level functions within the EDD UMTS marketing project and other technical units within Ericsson. As an ideal candidate you should have a University degree and several years of experience (3-5 years) within the mobile telecommunication area. Furthermore you have several years of experience within the Ericsson company and good international connections to other Ericsson organisations. You are experienced to work in project organisations and used to work with several interfaces.

You are open-minded, work in a team oriented way and bring personal charisma with you. You know how to use MS office tools and have excellent presentation skills. Very good English as well as good German language knowledge both in writing and speaking are prerequisites for this position.

**Contact:** Dietmar Seidenberg, Dietmar.Seidenberg@edd.ericsson.se, Phone: +49 211 534 1339, Hans-Jürgen Vratz, Hans-Juergen.Vratz@edd.ericsson.se, Phone: +49 211 534 1441, Ericsson GmbH, Fritz-Vomfelde-Str. 2640547 Düssel-dorf, Germany.

## ERICSSON RADIO SYSTEMS AB, SUNDBYBERG

DO YOU WANT TO WORK IN AFRICA AS A PROJECT CONTROLLER?

● We now have interesting challenges for you within our new GSM-contracts in Afrika.

You will participate in the projects having the controlling responsibility during the implementation. This means implementing correct invoicing procedures, budgets and cost follow-ups, internal administrative routines and tools and in general represent the financial competence needed within the project management team.

As this is a demanding position you must be flexible and sensitive in your relation towards the customer and the project team. You should also be familiar with the ERICSSON way of working and have a strong personal drive and be creative in finding solutions. You're a "CAN DO" person!

The formal background is B.Sc. in Business Administration and some years of experience from ERICSSON. The language is french and english.

If you send your application by E-mail, please send copy to Bengt Franzen and Fredrik Westman

**Contact:** Bengt Franzen, phone +46 8 4047943, bengt.franzen@era.ericsson.se, Fredrik Westman, phone +46 8 58534623, fredrik.westman@era.ericsson.se. Application: Ericsson Radio Systems, AB/LP/H, Anita Malmström Wallner, 164 80 Stockholm, anita.malmstrom-wallner@era.ericsson.se

## ERICSSON SPOL S R.O. (ECZ)

### Vitame GSM in Czech Republic - Roll out of a new huge network

*Ericsson is preparing to roll out the third GSM network (900/1800). The final decision will be taken before the end of September. The planning is based on a complete turn key solution, from site acquisition to operation & maintenance.*

● For its rapidly expanding operations, ECZ requires the following professionals: RND engineers. TND engineers. Civil works specialists/experts. RBS supervisors/test Engineers. ML supervisors/test Engineers. BTS Design engineers. SS Support Engineers. BSS Support Engineers. O&M Engineers.

Managerial positions: Operations. Project Management. RND and TND. Logistics. Civil Engineering and Construction. System Support. NO&MHR.

Basic Requirements for all positions: long experience of AXE and GSM environment, as well as international experience. You should also have power of initiative, high motivation and a good ability to co-operate. For the managerial positions you must have earlier experience as a manager.

**Contact:** Andre Grce, NAM, +420 2 611 94 326, Olof Wassvik, Operations, +420 2 611 94 394, Lotta Eckerud, Human Resources ERA/LP/H, +46 8 404 5033, Lars Kristofferson, Operations, ERA/LP/NO +46 8 764 1268. Application: Ericsson Radio Systems AB/SG/ERA/LP/H Lotta Eckerud, 164 80 STOCKHOLM, e-mail: lotta.eckerud@era.ericsson.se



The date for the opening ceremony for the Telecom World's own Olympic Games is fast approaching. Upwards of 250,000 visitors, including 3,000 journalists are expected to attend Telecom99 from October 10-17 in Geneva, Switzerland.



For Ericsson, Telecom99 is one of the major opportunities to promote its image. This was Ericsson's display at the last Telecom exhibition in 1995. Photo: Lars Åström

## Telecom Olympics under starter's orders

It's a chance for the industry to show-off. This is not simply a product fair, it's an exhibition giving an opportunity to show who has the best visions of the future, says Mats Rönne, head of marketing at Ericsson.

The exhibition isn't the biggest of its kind. In comparison with CeBIT in Germany, or Comdex in the U.S., it is significantly smaller. But it is probably the most important. It brings together prominent customers, politicians, executives, and a mass of telecommunication journalists.

### Back seat for products

The companies have limited space for their displays, so products take a back seat. The focus of attention is placed on image, message and vision. Only a fifth of Ericsson's displays are for demos or products, while more than half is reserved for meetings with customers and executives, including conference rooms and cafés.

The exhibition is a large undertaking for Ericsson. Around 170 people will be working for Ericsson during the show, meaning a significant expenditure of time and money: the organizational effort required is the same as that for CeBIT, even though the display area is considerably smaller.

"Ericsson has much to gain at Telecom99. In the short-term, it is obviously an important meeting-place for our customers and us. But it also has long-term benefits. It is an important chance for us to

promote our image. Furthermore, there is a useful "side-effect". Internally, we have to focus and formulate our message," says Mats Rönne.

### Focus on mobility

Mats Rönne is now putting together the finishing touches to the concept he wants to spread at Telecom99. Ericsson's main slogan will not be revealed until the inauguration of the exhibition, but Mats has hinted that, of course, the message is about mobility.

"We have concentrated on two aspects. The first is the users and how they can benefit from the new networks using a number of different end-user applications. Here, we demonstrate a number of infor-

mation services, fun games and entertainment, as well as what the third generation's mobile system can offer us," says Mats Rönne.

The second aspect is evolution. Ericsson will describe how today's network shall become the future's. Our customers' current networks will become the next generation of multi-service networks, which combine circuit-switching and packet-switching, fixed and mobile technologies.

Mia Widell Örnung  
mia.widell@lme.ericsson.se

☞ <http://www.ericsson.se/telecom99>  
<http://inside.ericsson.se/telecom99>  
<http://www.ericsson.se/infocenter>

## Media out in force

Around 3,000 journalists are expected to visit Telecom99 in Geneva. Appetizers and advance articles have already appeared in the media.

For Ericsson and the rest of the industry, the exhibition is a golden opportunity to convey information to the market and to the public.

"There is enormous interest. Every day, we receive calls from journalists who want to make sure we won't forget them. This will be the best opportunity for us in the

foreseeable future to position ourselves in the eyes of the journalists. The world's media will be there," says press officer Helena Norrman.

For journalists too, the most important factors are the message, the image and the visions.

"Journalists don't focus primarily on products, but on ideas for the future. This allows us a good opportunity to communicate our strategy and visions," says Helena Norrman.

### UPCOMING

**10-17 October:** Telecom99 + Interactive99 in Geneva, Switzerland. International Telecom Union's exhibition returning for its fourth year. Contact will be there, reporting on the latest news and events.

### UPDATES

Ericsson's newly appointed corporate controller, Sten Fornell, will also take on the role of acting Chief Financial Officer; the position formerly held by Carl Wilhelm Ros.

"Sten Fornell as acting CFO will ensure that we can pursue our objective to improve operational performance at a rapid pace," says Kurt Hellström, President of Ericsson.

Sten Fornell joined Ericsson in 1982 and has most recently been controller at business segment Network Operators and Service Providers.



Sten Fornell

Ericsson has now established its Information Center web-site. It's an easy and versatile way to obtain up to the minute news on Ericsson and the telecom world. [www.ericsson.se/infocenter](http://www.ericsson.se/infocenter)

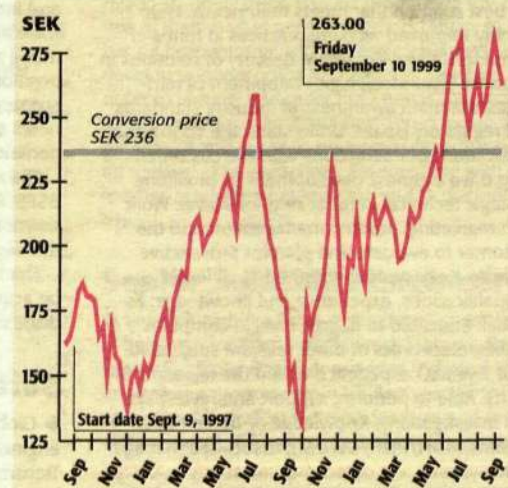
Ericsson has received their first CDMAOne order, since Ericsson bought the Infrastructure Division of the American company, Qualcomm. The order from Mirror S.A. in Brazil is worth around USD 200 million (SEK 1.6 billion).

### NEW ASSIGNMENTS

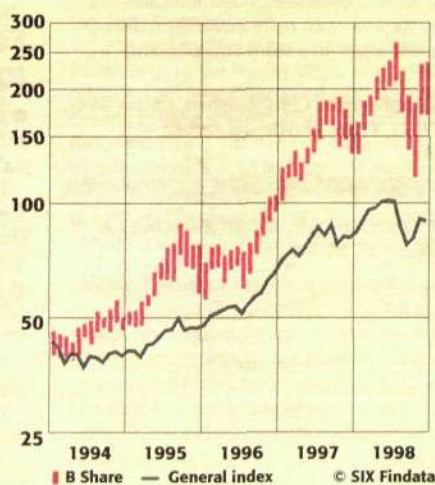
**Rory Buckley** is joining Ericsson Inc. in the United States as Executive Vice President responsible for Ericsson's Global Business with AT&T.

**Torbjörn Ward** has been appointed Head of Product Unit Digital Wireless Office Service (DWOS) within Business Unit TDMA Systems, succeeding Rune Johansson, who has taken up a position within Business Unit CDMA.

### THE ERICSSON B SHARE



An Extraordinary General Meeting of shareholders on September 9, 1997, approved a proposed convertible debenture program. The conversion period extends through June 30, 2003. For additional information, access the web site: <http://inside.ericsson.se/converti.htm>



■ B Share — General index © SIX Findata



# contact it/tip

SEPTEMBER 1999

The Internet public will be able to easily follow races prior to the America's cup in New Zealand, thanks to Ericsson's Wireless Internet solutions.

Virtual Spectator gives viewers a choice of six camera angles, speed and direction indicators for both boats and the wind, and much more.

	AMERICA TRUE				YAKKA			
MARK	TIME	GAP	LEAD	DELTA	LEAD	GAP	TIME	MARK
Start				0:00:01				Start
One	0:27:15	0:00:32	0:00:01	0:00:31			0:27:47	One
Three	0:22:54		0:00:12	0:00:12	0:00:00		0:22:35	Three
Two	0:26:23	0:00:30	0:00:40	0:00:40			0:26:53	Two
Three	0:18:56	0:00:40	0:01:22	0:01:22			0:20:38	Three
Two	0:23:07	0:01:22	0:02:14	0:02:14			0:24:29	Two
Four	0:18:06	0:00:01	0:02:44	0:02:44			0:18:07	Four
TOTAL ELAPSED TIME 0:17:43					13:30 PST			

## Wireless Internet adds a new dimension

Thanks in part to Ericsson's Wireless Internet Infrastructure, Net-connected fans of yacht racing around the world now have a completely new way to follow the drama of the fastest sailing vessels and the best crews competing for glory on the high seas. Ericsson's sponsorship of real-time, 3D animated coverage of the Louis Vuitton Cup yacht races, will showcase the tangible benefits emerging from developments in wireless Internet technology based on CDPD, GPRS and WCDMA.

The Louis Vuitton Cup Challenger Races are the last hurdle for teams hoping to compete next February in the most prestigious yacht race of them all – the 148-year-old America's Cup, where Ericsson's sponsorship will give the company a high profile before a worldwide audience in the hundreds of millions. From mid-October and continuing into the new millennium, the Louis Vuitton Cup will pit a dozen syndicates representing eight countries against one another for the honor of challenging Team New Zealand, the current holders of one of the most revered prizes in sports, in the America's Cup 2000 race.

Ericsson's sponsorship of Virtual Spectator will give 100,000 yachting enthusiasts the opportunity to follow each race in detail right from their computer desktops. An exciting new concept in sports coverage, Virtual Spectator gives viewers interactive access to a range of details as the races unfold.

By combining hybrid CD-ROM, global positioning, tactical yachting software and Internet technologies, Virtual Spectator overcomes the



Using Ericsson's Wireless Internet solutions, viewers can get as close to the sails as is possible without going on board.

Internet's bandwidth limitations to give viewers a choice of six camera angles, speed and direction indicators for both boats and the wind, split leg times for each boat and much more. On-screen instruments put viewers right at the helm, making tactical calls alongside the professional skippers as wind conditions change and competing boats make their moves.

Live, 3D action of the race is made possible as each boat transmits race data which is instantly converted into graphic animation to

recreate the race on a PC screen. The graphics-heavy content resides on CD-ROM, so only low bit-rate data needs to be transferred across the network. And to further guarantee adequate capacity, only 100,000 CDs will be made available.

"Our sponsorship of Virtual Spectator is a great way to leverage Ericsson's involvement in the America's Cup," says Barbara Pistilli, director of Marketing Communications at Ericsson Wireless Internet. "For one thing, we'll get our brand out in front of a large audience just as interest in the America's Cup is reaching a peak. But just as importantly, it highlights the strengths of wireless technologies for an audience eager to see real-world applications."

And yacht racing may be just the beginning. Arron Judson, who has anchored the Virtual Spectator project for Ericsson New Zealand, sees this first outing as a foot in the door for on-line coverage of auto racing, bicycling, track & field and many other sports. "This is an excellent way for us to learn about these new and exciting Internet applications that take advantage of our expertise in mobile and wireless," he says. "As the technology advances, we're well positioned to continue to enable more complex and information-rich applications."

Kevin Billinghamurst

www.virtualspectator.com  
www.americascup2000.org  
americascup.ericsson.se  
www.ericsson.com/virtualspectator

### FILMTIP

## Net warriors on video

How does data transmission across the Internet really work?

Ericsson Medialab explains the technology in a simple and fun way in its new animated web film, "Warriors of the Net."



When a computer user clicks on a hyperlink, a number of things start to happen on the data network. The main stars of the "Warriors of the Net" video include the small data packets, routers, the company's fire-wall and the evil Ping of Death virus.

Viewers meet these characters along with a few million other bits in supporting roles in the thirteen-minute film.

"Our target audience is anyone, from managers to school classes, who are interested in a comprehensive explanation of how the Internet works," says Niklas Hanberger, one of the people who put the film together at Ericsson Medialab in Stockholm.

The idea for the video came from Medialab's Tomas Stephansson. While lecturing on the advantages of IP telephony, he realized just how many people there are who wonder how the technology works.

The web film allows people to visualize, in a simple manner, how the various pieces of a data network fit together, why data sometimes gets lost and why it can take time to download information from a web site.

"Warriors of the Net' is available in MPEG1 format and can be downloaded from either the Internet or Intranet," explains Gunilla Elam, who did the animations. Without a doubt, the film will be a big Intranet success this autumn. Coming soon to a screen near you.

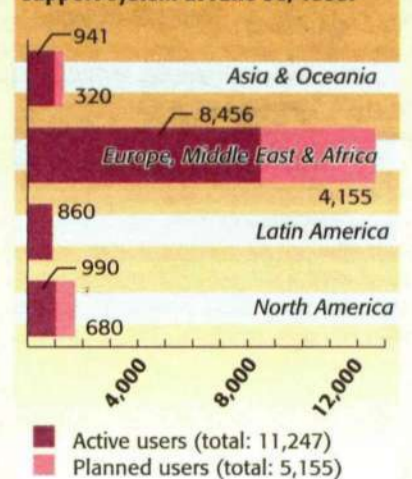
Nils Sundström

nils.sundstrom@lme.ericsson.se

www.ericsson.com/medialab/warriors/

### INCREASING NUMBERS USE SAP

Active and planned future users of the Ericsson's SAP business support system at June 30, 1999.






# FEEL THE HEAT

National's new family of digital temperature sensors sets new standards for price and perform-

ance – offering more choices in: accuracy, resolution and economy. Just take a look at these specs:

Digital Temperature Sensors					
	LM75	LM77	LM74	LM76	LM84
<b>Description</b>	<b>Industry Standard Digital T/S</b>	<b>Improved LM75 with ACPI</b>	<b>Low Cost Digital T/S</b>	<b>High Accuracy LM77</b>	<b>Remote Diode T/S</b>
Supply Range	3.0 to 5.5V	3.0 to 5.5V	2.7 to 5.5V	3.0 to 5.5V	3.0 to 3.6V
Supply Current	250µA	250µA	310µA	250µA	500µA
Power Down	Yes (6µA)	Yes (5µA)	Yes (8µA)	Yes (5µA)	No
Resolution	9-bit (0.5°C)	10-bit (0.5°C)	13-bit (0.0625°C)	13-bit (0.0625°C)	8-bit (1°C)
Accuracy	±2.0°C (-25 to 100°C) ±3.0°C (-55 to 125°C)	±1.5°C (-10 to 65°C) ±3.0°C (-55 to 125°C)	±1.25°C (-10 to 65°C) ±2.1°C (-25 to 110°C)	±1.0°C (70 to 100°C) ±2.5°C (-25 to 125°C)	±3.0°C (60 to 100°C) Remote Sensor
Operating Range	-55 to 125°C	-55 to 125°C	-55 to 150°C	-55 to 125°C	0 to 125°C
Interface	I <sup>2</sup> C	I <sup>2</sup> C	SPI/µWire	I <sup>2</sup> C	SMBus
Thermal Window Comparator?	No	Yes (ACPI)	No	Yes (ACPI)	No
Over-temperature Shutdown?	Yes	Yes	No	Yes	Yes
Conversion Time	100ms typ	125ms max	100ms typ	500ms max	100ms typ
Packages	SO-8, MSOP-8	SO-8	SO-8	SO-8	QSOP16

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Internet provider America On-line has purchased the Ericsson Erion Networker to increase capacity in the Washington area of the U.S.

Photo: Scanpix

# Ericsson fiber increases capacity

Ericsson has been involved in optical switching technology for more than 15 years, but it is a feature that has been overshadowed by other Ericsson activities. However, Ericsson had a big win this summer when America On-line chose the ERION Networker for an wide-area optically protected metro ring around the U.S. capital city.

AOL, the world's largest ISP, was in the market for a Dense Wavelength Division Multiplexing (DWDM) solution to expand the capacity of its Washington D.C. infrastructure, a 140-kilometer fiber ring that the company wants to connect directly to its huge data centers.

The installation had all the elements that Ericsson's designers envisioned, lying as it does at the interface between the largest retailers of Internet bandwidth and the backbone itself.

But the Ericsson solution lacked a command-line interface (CLI), which the AOL team – with its long experience from Cisco routers – considered essential.

"Their first response was that we weren't even being seriously considered, even though their people seemed to expect that an evaluation would show our technology as superior," said Roselyne Genin, president of the Optical Networks group and the leader of the team that landed the AOL order. "Without a command-line interface, the system would require too much re-training, so we got them to outline their needs and went to work on a CLI."

## Deal after six months

Less than six months later, the multimillion-dollar deal was announced at the Supercomm trade show in Atlanta. The system operators are getting a familiar environment for their remote management routines, but they'll now be working with a 16-fold increase in bandwidth. In one leap, capacity will grow from 2.5 to 40 GB per second, and the system is scalable to 320 GB per second – without the need for laying new fiber.

By splitting the light pulsing through fiber

optic cables into its constituent wavelengths, or colors, each transmitting its own stream of IP packets, DWDM increases the capacity of existing glass by a factor of up to 32 and beyond.

The older TDMA standard cannot handle multiple bit rates, framing types or protocols, giving operators even more incentive to upgrade to DWDM.

Ericsson's competitors in the field include Lucent, Nortel and Ciena.

It is an advantage that Erion is based upon a

unique, patented failure protection system that gives more security than the competition while keeping open a migration path to future transport systems based on ATM and gigabit ethernet.

In most networks today, SONET Time Division Multiplexing Equipment provides the alternate path that re-routes traffic in the event of a failure in the main path.

## Fiber rings possible for cities

Erion provides optical switching all the way around the ring, eliminating the need for a SONET layer and allowing construction of much larger wide-area metro rings such as the one being deployed for AOL. That 140-kilometer ring is still far below the maximum of 500

kilometers in circumference that Erion is capable of covering.

Roselyne Genin points out that the AOL project spotlights Ericsson's focus on IP solutions.

"This is an integral part of the multiservice network offering that we see as the future for the company," she says.

"Our system is an open system. You can connect any optical interface, from 100 megabits up to 2.4 gigabits, and whatever you put into the system is what you get out. That means complete transparency between services, from older asynchronous solutions all the way to gigabit ethernet."

## Best kept secret

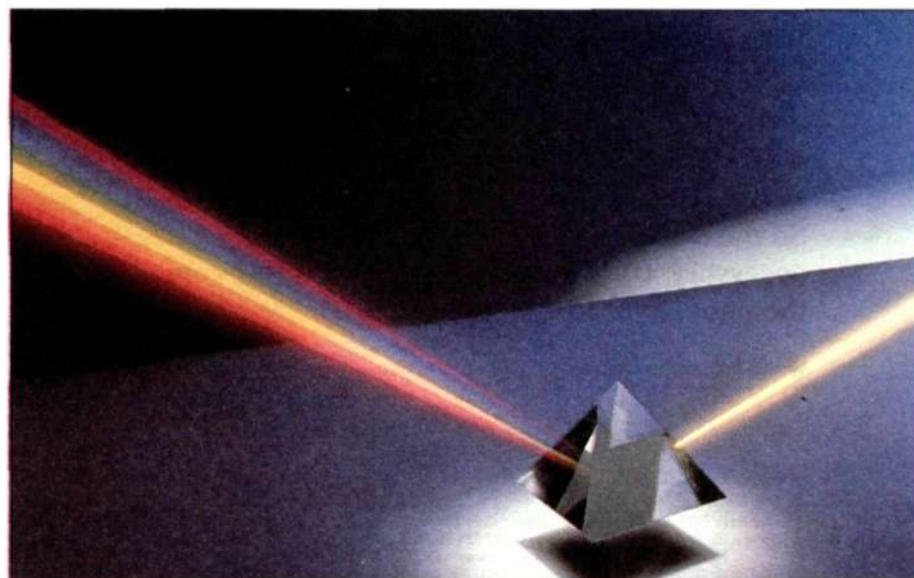
Roselyne laughingly calls it Ericsson's "best-kept secret" that the company has been active in optical switching for more than 15 years.

"For a long time, we've been producing state-of-the-art, carrier-class components such as optical amplifiers and lasers," she says. "Our biggest competitors are using Ericsson components to deploy DWDM and other fiber systems."

But, as Genin's team discovered in its first contacts with AOL, having the best technology doesn't always mean getting the sale.

"Of course the most important thing is having a product that meets the customer's needs," she said. "But sometimes it's the little things that can make a difference. We've been in contact with AOL on a daily basis for several months now, adapting the Flexing Bus system to meet their needs, and the AOL executives I talk to have told me several times how much they like working with us."

Kevin Billingham



Ericsson's ERION Networker solution enables high capacity for transport networks using fiber technology. The light is divided into different colors and information can be sent in parallel with different wavelengths.

Photo: Superstock/Great Shots

Ⓞ [http://www.ericsson.se/wireless/products/transm/transport\\_solutions.shtml](http://www.ericsson.se/wireless/products/transm/transport_solutions.shtml)



**Situation:** *You need microwave test accessories ASAP.*



**Option 1**

*HP switches and attenuators offer 0.03 dB repeatability over 5 million cycles and are available through QuickShip. HP amplifiers offer ultrabroad bandwidth from 10 MHz to 50 GHz, which simplifies test set-up.*

**Option 2**

**Call HP DIRECT on one of the numbers listed below.** No matter what accessory you need to complete your test system, HP DIRECT is an easier way to get it.

With a simple phone call, you can choose from more than 800 accessories – from switches to amplifiers to attenuators and more. All offer lower cost of ownership by providing superior performance over millions of cycles. We can even connect you to an HP engineer who can answer your technical questions.

So the next time you consider “borrowing” an accessory, try a faster plan of attack: pick up the phone.

[www.hp.com/go/mta](http://www.hp.com/go/mta)

**HP DIRECT**



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France 01 69 29 41 14 • Germany (0180) 524 63 33 • Greece 01 726 40 26 • Ireland 01 615 8222 • Israel 03 53 80 377 • Italy 39 02 9212 2241  
Netherlands 020 547 6669 • Norway +47 22 73 57 59 • Poland 48-22-7230066 • Spain 34 91 631.13.23 • Sweden (08) 444 2277  
Switzerland (French) (022) 780 4361 • Switzerland (German) (01) 735 72 00 • United Kingdom 01344 366666.



# Jalda – for small and secure Internet payments

Imagine jumping on a train, and paying for the trip on your telephone bill at the end of the month. How about paying for a cab, concert tickets, your parking meter, or a can of soda via your cellular phone? Or playing videos, music or Net games on your Palm Pilot or other PDA between classes? The Jalda payment system from Ericsson Hewlett-Packard is making all this possible.

By the year 2000, 233 million people will be carrying devices able to access the Internet, and the demand for secure payment for goods and services is expected to skyrocket, according to market research firm International Data Corporation.

The truth is that an enormous gap exists right now in the world of Internet payment systems. Currently, Internet payments are generated from Web shopping, such as the purchase of books from Amazon.com. There is no standard for payments for anything other than the sale of physical goods. The two major Internet payment systems currently in place are SSL for encrypted credit card/payment information and SET (Secure Electronic Transaction) developed by credit card companies for online authorization of credit card purchases. The systems tend to lack flexibility, and are either slow or expensive to use.

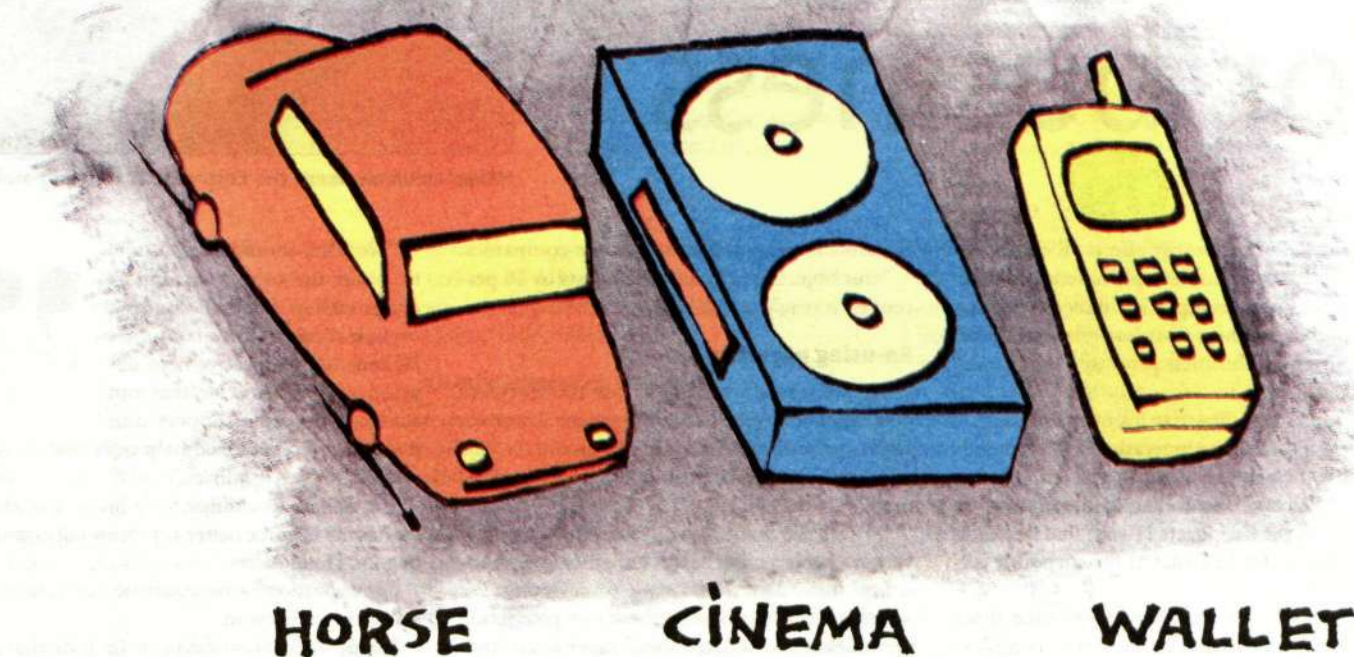
## Increase in Net commerce

"By 2005 e-commerce is expected to reach USD 1 trillion. There is a need to move beyond the credit card as the dominant Internet payment method to a less complex, more secure, more flexible solution," explains Magnus Lageson, marketing manager for Internet Payment Systems for Ericsson Hewlett-Packard Telecom AB (EHPT) in Stockholm.

"We especially need micropayments that are session-based payments capable of being made from anywhere, using any terminal – stationary or mobile."

This is where Jalda comes in.

Jalda is freeware – an open standard payment method, which can be used for free. EHPT expects that by the year 2001, Jalda will be the micropayment industry standard. A content provider registers as a Jalda user with an Internet Payment Provider (IPP), then embeds this set of application programming interfaces into any application. Jalda then keeps track of elapsed time, quantities, mouse clicks, data files accessed, searches, points earned, kilobytes, lives in a game, or virtually any parameter set by the content provider. These features allow for awarding prizes, credits and bonuses back to the players, not only billing.



Developments are progressing. It's been a long time since a cellphone was merely a device for spoken communication. Small payments can now be easily made from a cellphone using Ericsson Hewlett-Packard's Jalda solution.

Illustration: Ulf Frödin

The second part of the architecture is the EHPT SAFETRADER, which is the Internet payment server that EHPT offers for administering user information and keeping track of transactions.

## Pay anywhere

The SAFETRADER is owned and run by the IPP, and keeps track of prices and costs, generating the billing of the customer for the content provider. Customers pay for usage, which can cut down on software piracy, for example, because a customer is charged a fraction of the cost of the total software licensing fee for a one-time, limited use. For payment verification purposes each customer receives a unique digital certificate upon opening an account, and this certificate authenticates that the customer has indeed authorized the transaction.

Jalda was not developed to duplicate existing payment methods by transferring credit card

information, or e-currencies over the Net, although it is capable of handling those types of transactions as well. Customers can make large or small payments using stationary PCs, cellular phones, or any other communication device with Internet access. For wireless purposes, there is a separate product called W-Jalda, which handles the same applications using standard SMS or WAP technology.

## Small opportunities for fraud

"The opportunities for fraud are small because billing is handled by a trusted third party IPP – which can be a network operator, a credit card company or a bank. There is verification of the customer's right to purchase and receipts are issued," adds Magnus Lageson.

EHPT is starting with the Swedish and American markets for their SAFETRADER system, while supporting Jalda use worldwide. Within a year they expect to have 25 large IPP global customers using Jalda and the EHPT SAFETRADER, opening up further growth possibilities for all kinds of additional services to be offered via the Net. Since Jalda payments can be processed around the world within seconds, at a fraction of the cost of other methods, it may be that we will soon find ourselves in Net consumers' paradise.

Maggie Curran

www.jalda.com  
www.ehpt.com/products

## THE NAME JALDA

Nestled between Iceland and the Shetland Islands in the Atlantic, the tiny group of volcanic Faroe Islands can lay claim to the origin of this Internet payment system's name. Jalda derives from the islanders' word for money, gälða, which is rooted in the ancient Celtic tradition of the area.

## Games and music sites use Jalda

As Web entrepreneurs recognize its potential, the Jalda solution is already finding eager adopters. The MNW Records Group in Sweden, through its B2 project, is preparing to offer an Internet music service using Jalda. B2 will offer consumers a one-stop shop for downloading commercial digital music.

And downloads are only part of the story: in addition to commercial music from signed artists and free music from groups still looking for record contracts, B2 will offer editorial content and communities.

"The reason that we have chosen this system is the simple integration process, support for micropayments and flexible billing procedures. And we also like the telecom feel about the whole thing," says Henrik Bergquist, who is the B2 project manager.

Daydream Software, a gaming company in the north of Sweden, has embedded Jalda in their 3D networking interactive game, Clusterball, to great success. Now they are able to provide gamers with 'pay as you play' opportunities which weren't available before. And this is translating into more cash for Daydream, as they reach more people.

"Jalda gives us innovative ways to pull in more revenue. Providers like Daydream can charge per click, per minute, per play or even by multiplayer worldwide tournaments," says Jan Phersson-Broberg, President of Daydream Software.

http://www.cabal.se/mnw/index.html  
www.daydream.com



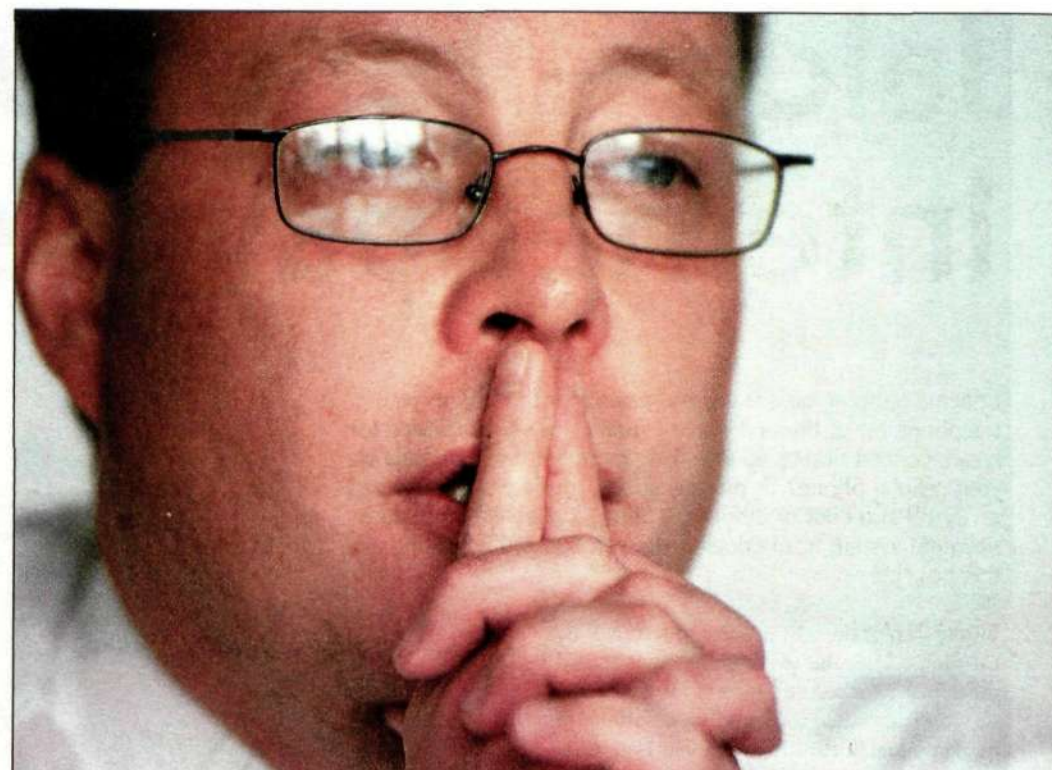
Small payments via the Internet will be simpler using Ericsson Hewlett-Packard's Jalda solution. This will make it possible to change for playing computer games on the Internet.



Håkan Liedman is one of Ericsson's hidden powers. As Chief Information Officer (CIO) and responsible for IT policy for all of Ericsson, his decisions have a direct impact on Ericsson's profitability.

"IT must support business processes while at the same time creating business opportunities," says Håkan Liedman.

## IT is essential for business



Håkan Liedman heads the Corporate IT function and has an important role in ensuring Ericsson's profitability by reducing IT costs by 10 percent annually.



Photo: Lars Åström

Ericsson's IT expertise affects all employees. IT support should simply function without making its complexity directly evident. This means that there is a clear relationship between Ericsson's business processes and internal IT development.

"An important objective for our IT strategy is to further rationalize operations. IT currently accounts for between 3 and 4 percent of Ericsson's total costs," says Håkan Liedman, who together with the Corporate IT staff that he heads, is responsible for IT issues at the corporate level.

Ericsson's IT costs are no higher than those of other major companies. However, considerable effort is required to reduce these costs to

the same levels as the most efficient companies. "Our objective is to reduce IT costs by 10 percent each year," says Håkan.

### Re-using expertise

There are several ways to increase efficiency. An overriding objective is to introduce common work methods and standard IT systems. In this way, existing expertise can be leveraged and re-used.

"Half of the changes that we are introducing in various projects are based on existing components. Instead of continuing to re-invent the wheel, we have to become better at promoting examples of good IT solutions," says Håkan Liedman.

"We also shouldn't continue to build up complete support organizations for each country, organization or unit," continues Håkan. "Our objective is to develop a shared service that can act as a corporate support unit and a more centralized help desk that can answer most user inquiries."

"Instead of continuing to re-invent the wheel, we have to become better at promoting examples of good IT solutions."

Centralization is necessary to retain core IT skills within Ericsson.

"Many international reports indicate that it is increasingly difficult to recruit competent per-

sonnel in networking and support for various applications. This is a dilemma for the entire industry," notes Håkan Liedman.

Increasing coordination of IT resources within Ericsson means that line managers must also to an increasingly greater extent purchase the IT expertise and support needed both internally and externally.

"Knowing exactly what IT expertise can be

purchased gives them better control over IT issues," says Håkan Liedman.

Creating a uniform IT environment as possible within Ericsson is also an important part of rationalization measures.

### Elimination of systems

The installation of the SAP R/3 business system is one example. This is part of an initiative that

within a three-year period will lead to the elimination of 1,000 out of a total of 12,000 small and large systems that Ericsson uses to support business processes.

"Another example is that there is now a common system for electronic commerce," says Håkan Liedman. "Our job within the Corporate IT function is to provide an architecture that works for many different users."

In the same way, a standard office solution is intended to make the IT environment more effective.

"The introduction of ESOE (Ericsson Standard Office Environment) gives users a number

of standard applications on their computers that make us all more flexible as employees. But this is also an important component in our security policy," notes Håkan Liedman.

### User perspective essential

Ericsson's IT strategy is based on a user perspective and business operations. This means that changes in IT systems must be demand-driven.

"Simply put, this means that we must provide an effective interface between those who use IT systems and those who do the work. We don't talk about different systems but about the work to be done," says Håkan Liedman. "By implementing a process organization, Ericsson

will be more able to clarify the internal demand for IT and to place demands on the systems that are used throughout the organization, including how they will be used and how many we need."

The new organization should also make it easier to take advantage of the IT ideas that can lead to new business opportunities. With the new process owner structure, those hatching such ideas should find a natural conversation partner.

Nils Sundström

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## Purchasing goods and services on the Net cuts costs

Ericsson employees are starting to purchase goods and services electronically. With a Web-based system, called Click to Buy, Ericsson is seeking to rationalize purchasing and invoicing.

An earlier version of the system was used within Ericsson Telecom, but now it is being expanded to other units within the organization.

"Click to Buy is a major and significant change for Ericsson," says Bo Westerberg, who is responsible for purchasing at the corporate level.

"Above all, we are rationalizing our own work, but we can also negotiate better conditions with suppliers and more easily press prices on the goods and services that are offered on the purchasing site. Suppliers are automatically subject to competition, since all are listed on the same site," notes Bo Westerberg.

With Click to Buy, every employee can make purchases.

Employees simply open their browsers and purchase the goods and services that they need to do their jobs.

### Leaving paperwork behind

Whether it is a computer, a desk, office supplies or consulting services, everything is done electronically, from purchasing to authorization.

"Click to Buy can eliminate wasted time. Every initiative that eliminates paperwork is welcome," says Tommy Strömbäck, newly appointed manager for the implementation of Click to Buy. "This means that you have more time for productive work. I thought it was great when I started buying books at Amazon.com, for example, and I like buying things for my



Times are changing. Now Ericsson employees can make purchases directly on the Internet. Click to Buy lets employees make their own purchases of computers, desks or even consulting services directly on the Web. The new system is simple and saves time.

Photo: Great Shots



home on the Net. Now I want to get the same service at work."

The new system will be launched on October 1. It will start as a pilot project at the parent company L M Ericsson, the GSM Systems

and TDMA Systems business units and Ericsson's development company UAB. Meanwhile, ETX employees at Ericsson Telecom will continue to use an earlier version of Click to Buy.

"The objective, however, is that Ericsson Tele-

com, as well as the rest of the organization, will make the change to the new version of Click to Buy," says Bo Westerberg.

Today's paper-based systems often require much more work. Purchase orders are often miss-

ing, meaning that the economy department must spend unnecessary time trying to determine to which department invoices should be charged. The administrative cost for purchasing is currently estimated at SEK 600 to 800 per invoice.

"If I want to buy a cake, for example, and phone the bakery directly, the cake will most likely be very expensive and end up costing Ericsson about a thousand Swedish Crowns, instead of 200 in the shop," says Bo Westerberg.

"With Click to Buy we expect to reduce administrative costs by up to 80 percent," notes Peter Lageson, who is responsible for purchasing consulting services.

"How much Click to Buy will save Ericsson is

difficult to say," says Tommy Strömbäck. "I have seen estimates that show that we can save billions, but that depends on how we use the time that the system will save. But the potential is there."

### Homing in on goods and services

Initially, there will be separate start pages for goods and services. The home page for goods will include some 20 product categories ranging from furniture to office supplies. There will be recommended suppliers for each product, and employees will be able to click on a product and place it in a shopping basket. The order to the supplier, as well as the purchase authorization, will take place electronically.

For consulting services, the Ericsson employee will issue a request for tender. The consulting company can then download the RTF from the web site and create a tender that will be forwarded to the purchaser via e-mail. Once again, the entire flow is electronic.

### Skills database

The consulting web site will also include a skills database where the purchases can see what services consultants can offer.

Click to Buy will mean a number of changes for purchasers, as well as the economy department. Not only will the system result in less work. Purchases will also become more sophisticated.

"We are trying to create a dialogue with suppliers so that we can negotiate prices, while keeping tabs on the products offered. The internal processing of purchase orders and invoices will be reduced," concludes Tommy Strömbäck.

Mia Widell Örnung

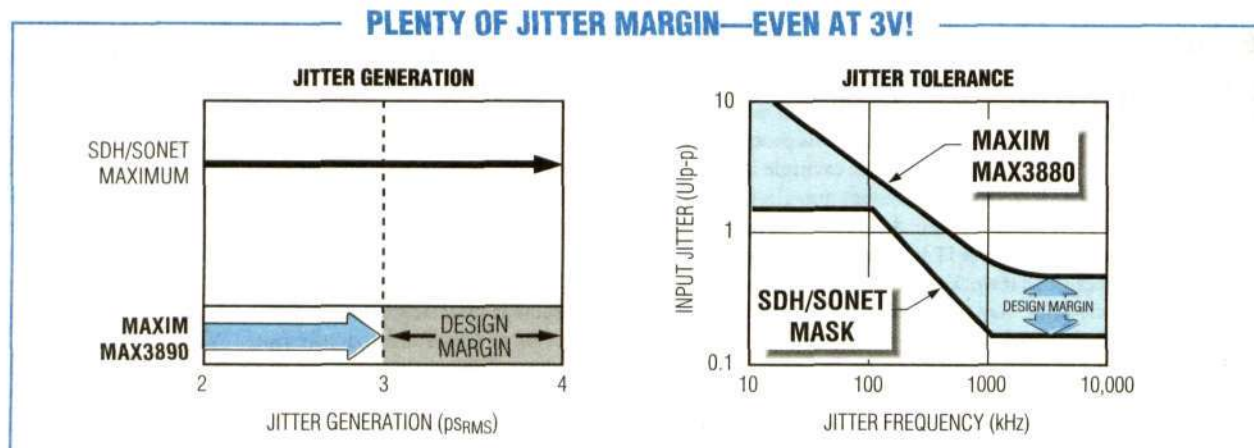
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	Transmitter	1 64-TQFP	1 80-PQFP	1 128-PQFP

<sup>†</sup> 1,000 pc. factory direct. 100 pc. factory direct price is \$162.50.  
<sup>††</sup> 100 pc. factory direct.  
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# Powerful IP solution

The acquisition last April of Torrent Networking Technologies strengthens Ericsson's datacom product portfolio with the addition of the carrier-class AXI 540 Edge Aggregation Router.

The AXI 540 will also serve as a Label Edge Router in MPLS networks, interoperating with Ericsson Multi Protocol Label Switching technology to deliver a complete solution for IP over ATM networks.

Ericsson's purchase of Torrent was an important step in its strategic goal of offering its customers end-to-end IP solutions with a focus on performance, scalability and quality of service.

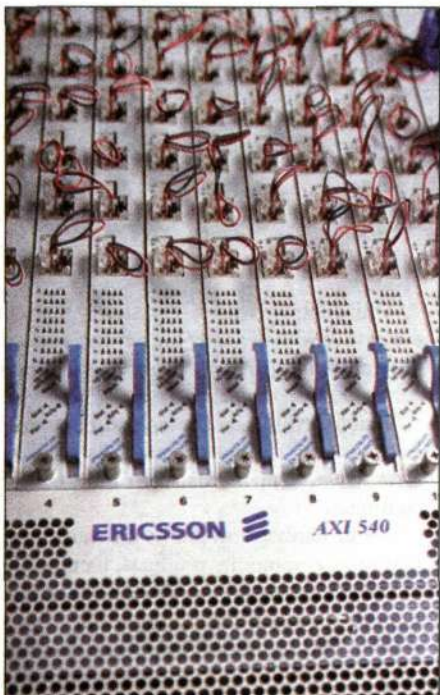
"Torrent was one of the first companies in the industry to recognize the importance of the new network edge," says Gordon Saussy, who came to Ericsson with the Torrent acquisition and is now Vice President of Marketing for the Ericsson IP Infrastructure group, part of the Infrastructure Product Unit within Ericsson Data Networks.



Gordon Saussy

## Edge of the Network

The new public networks being built using IP (Internet) standards, but offering carrier-class



This is what it looks like, Ericsson's new AXI 540 aggregation router, which was developed by Torrent.

functionality, require a new type of router at the edge of the network. For the last two years, Torrent has been designing and building precisely that router, and it will be rolled out this autumn as the Ericsson AXI 540.

## Highly advanced technology

"The AXI 540 includes a terrific portfolio of technologies developed by Torrent," says Saussy, and lists three of the most important:

- Patented algorithms to speed routing decisions
- Custom silicon to perform packet processing at line rates from STM 1 and STM 4 up to gigabit-per-second.
- A comprehensive and Internet-hardened suite of routing protocol software, developed and painstakingly tested over the last year.

The AXI 540 Edge Aggregation Router is being positioned within Ericsson's data portfolio as the IP aggregation point for high-speed fixed-access traffic from leased lines and ATM/Frame Relay switched networks.

The breadth of Ericsson's data solutions portfolio now truly positions the company as a leader in the migration from traditional circuit-switched networks to IP-enabled packet-switched networks.

## Autumn launch

Saussy's two-year stint as Vice President of Marketing at Torrent gives him a broad perspective on the changes taking place across the telecommunications world.

"The concept of IP Convergence is really about a number of different things," he says. "It's about the explosion of the Internet and new Internet applications such as e-commerce. It's about convergence of end-user applications onto the IP protocol, embracing not just the Internet but also Voice over IP and Virtual Private Networks over IP. And it's about the transformation of circuit switching to packet switching based on ATM switches and IP routers."

"The Torrent IP Infrastructure team brings Ericsson both market and technology experience in IP routing that can help us navigate this transformation. Ericsson IP Infrastructure is



Development work on the AXI 540 took place at Torrent Networking Technologies which Ericsson acquired in the spring. Assad Niang is seen testing the circuit board for the router. Photo: Dennis Brack

currently conducting field trials of the new AXI 540 system and plans a full rollout to the Ericsson field organization in the fall of 1999.

Kevin Billingham

<http://bndnip.ericsson.se/products/axi540.htm>

[http://www.torrentnet.com/products/agg\\_router.htm](http://www.torrentnet.com/products/agg_router.htm)

## IN BRIEF

### Dutch buy Tigris

► Ericsson has been chosen as sole supplier by WISH, the fast-growing Dutch ISP. WISH is positioning itself as a next-generation service provider based on an advanced Internet Protocol infrastructure.

Central to the order is the flexibility and scalability offered by the AXC Tigris Multi-Service Access Platform, which came into the Ericsson fold with the acquisition last year of California-based ACC, now the Access Products Division of Datacom Networking.

The first phase of the project is scheduled to be in operation by the end of the year, with some 300,000 users connected. The power of WISH is a fast growing customer base, combined with content provisioning from businesses and sport clubs. WISH is also partnering with

sport federations to broadcast sporting events over the Internet to their customers. WISH has recently signed an agreement with NCRV, a Dutch broadcasting organization, to offer all their 400,000 members a free Internet subscription via the WISH infrastructure.

### Radio goes global

► The Ginger Media Group, owner of Virgin Radio, will collaborate with Ericsson in early trials of wireless third-generation technology that could transform the nature of radio broadcasting and allow local stations to reach global audiences.

"Third-generation mobile networks will transform the landscape of the radio industry and provide the stimulus for global consolidation into entertainment groups,"

says Lee Roberts of Ginger Media. "We can see a day when more people around the world will listen to us via a mobile terminal than a conventional radio receiver."

In a first step, Ericsson and Ginger have added Virgin Radio content to the range of services being tested at Ericsson's 3G network in the UK.

### New health issues web site

► Ericsson has formed a strategic alliance with Canada's medEra Life Science Corporation to develop an Internet-based Health and Healing information center - medbroadcast.com - and other e-medicine initiatives.

The site offers a full turn-key solution. Ericsson is providing the technical project design and man-

agement, overall site architecture, advertising module development, e-commerce, pharmaceutical and content engines, as well as strategies for scalability, storage and delivery, and systems for international live event transmission.

MedEra plans to offer the online sale of books, tapes, videos, and medical and pharmaceutical supplies over the site. Eventually, medEra will offer on-line prescription ordering and purchase.

[www.medbroadcast.com](http://www.medbroadcast.com)

### Presentation material for free

► The Industry Standard site is a great place to go for professional PowerPoint slides on a wide range of Internet Economy topics. The magazine has posted nearly a hun-

dred presentations, each with two to ten slides, based on its critically acclaimed "Industry Standard Metric Reports" series. You can download any of them for free without registering and use the slides in your own presentations.

Recent additions to the library include a look at the toughening trend for Internet IPOs, a new count estimating that there are 92 million web users in North America alone, and a Gartner Group survey showing that the average cost of building a corporate e-commerce site has ballooned to USD 1 million.

The data is fresh, the source is authoritative and the graphics make your slide show look good. In other words, the site is well worth a visit.

<http://www.industrystandard.net/metrics/downloads/>





ISPs are giving users free Internet in return for information to allow targeted advertising.

Illustration: Syster Diesel

# Y-Pay revolutionizes ads

Y-Pay, a new advertising-based free ISP service, will use Ericsson's Internet Advertiser to create a sophisticated monitoring and reporting system that delivers targeted messages to specific users.

Operating a business as an Internet Service Provider (ISP) can be a frustrating experience. There has been an explosion in demand for the past four or five years, but there's also been an explosion in providers, from garage start-ups with a couple of servers and a leased line to some of the biggest telecommunications companies in the world.

Of course, it is possible to build a successful business by charging a modest monthly fee for access or Web hosting, but the really big opportunities are going to the content companies that can attract user traffic and then sell advertising. They provide the infrastructure that makes it all possible, but someone else controls the browser windows where the paying ads are placed.

But what if you could put the two together? Suppose you could leverage your expertise at operating reliable, high-speed servers to aggregate the eyeballs that advertisers will pay so dearly to reach. This is what Y-Pay hopes to achieve using Ericsson's Internet Advertiser.

## Dallas start-up

There is no such thing as a sure bet in the volatile Internet economy, but Y-Pay, a start-up based in Dallas, Texas in the U.S., is putting its chips down on a plan to do no less than revolutionize the on-line advertising industry by giving users free or low-cost access to the Web in return for providing information on demographics and personal interests, and then agreeing to view a handful of "polite" ads for each hour they are on-line. This is Y-Pay's concept.

The stakes are high – Y-Pay aims at becoming the second-largest American ISP in just two years, with annual revenues of more than USD 200 million.

Ericsson's Internet Advertiser technology is playing a central role. Under a five-year agreement, Y-Pay will incorporate Internet Advertiser

to distribute advertising targeted to specific user demographics and interests. And these aren't the site-specific, static banner ads now so common across the Web, but media-rich audio-visual productions which load into the subscriber's computer in the background without slowing down the time it takes to access a page.

"We wanted a solution that would provide advanced demographic gathering, fraud control and data reporting capabilities for our advertisers as well as guaranteeing the privacy of our users," says Mike Sheriff, founder and President of Y-Pay.

"Ericsson's Internet Advertiser proved to be the value-added solution that complements our expertise and provides comprehensive technology to help us meet our business objectives and goals. We are pleased to have a world-class company such as Ericsson as a strategic ally."

## Customer care and billing

In addition to technology, Ericsson's Business Planning and Consulting Services division will provide Y-Pay with a suite of value-added services including program management, business process development and selection of customer care and billing solutions. A top-of-the-line data center with a capacity of 1.5 million subscribers will be developed by Ericsson Professional Services under a Build-Operate-Transfer (BOT) contract.

Internet Advertiser is unique among on-line advertising solutions because it assures that ads reach their intended target audience. The ISP's database of submitted user profiles is used by Internet Advertiser to deliver short movies, rich media productions and text or audio messages. The technology was developed to open up new revenue-generating opportunities for ISPs through joint marketing efforts and real-time communication with customers.

Users can view ads while simultaneously accessing e-mail, participating in on-line chat groups or surfing the Web. And, with a few keystrokes, they can purchase products or services, request more information or provide answers to questions.

Ericsson announced the technology in late 1998, and soon after was approached by Y-Pay. "Mike Sheriff came to us with a fully developed business case for which Internet Advertiser was a perfect match," explains senior sales manager Mary Larson, who closed the deal on behalf of the emerging account team.

"Y-Pay's strength is in its deep understanding of the traditional advertising market as well as cutting-edge knowledge of new media.

"In the model of commercial radio and TV, one can only make certain assumptions about who is watching or listening to a given program. But with Internet Advertiser enabling user profiles, we now know when you log on, who you are and what you're interested in."

## Knowledge base helps customers

Mary Larson points to the value-added services aspect of the contract as an example of how Ericsson can gain from its formidable reservoir of business expertise to help its smaller customers succeed and return again to place new orders.

"We're essentially supplying an ISP data-center-in-a-box to Y-Pay," she says. "That lets them get on with the business of selling advertising, which is what they want to focus on."

Whether they are large or small, Ericsson's customers are often out to purchase more than a network solution. They need access to resources and expertise for the operation of the network as well. In today's booming economy, it can be almost impossible to find and manage the key resources necessary to keep network infrastructure running smoothly.



Mary Larson

"Our contract with Y-Pay shows that customers are willing to pay for services and software as well as hardware if it frees them up to concentrate on their core business," Mary says.

"Building this data center and operating a large network will further mark Ericsson as a serious player in the datacom industry," she continues.

"If our hardware solutions are in danger of becoming commodity products, then we have to move towards providing software applications and professional services for revenue growth. This is an important step in that direction."

The solution became stronger still with the announcement in July that Internet Advertiser would integrate the patented Polite Agent™ developed by BackWeb Technologies, a leading provider of Priority Internet communication infrastructure and applications software for the extended enterprise.

## Five ads for free Internet

Each ad begins with a "teaser" that moves across the screen to attract the user's attention. If the user ignores the ad, no statistics are gathered and the message goes away. But when the user sees something interesting and clicks on the teaser, the browser opens a full-page ad and the database registers a hit. The free access contracts with users will require viewing about five to eight ads per hour in order to maintain the connection.

"There are other companies testing the waters for free Internet access," Mary Larson says, noting that the model has been quite successful in the U.K. and, after a couple of rocky starts, is beginning to take off in the U.S. and other markets.

"But our technology is far superior to the banner ad model that the others use. You can train your eye to ignore banners, but our polite push technology makes it possible to know for certain that the message reached the intended user."

Kevin Billingham



# Function and fun with Zopps

How does a huge business scattered across the globe make good on a commitment to improve the computer abilities of its many multi-lingual employees, retirees, and their families, gather free market research, and retain the loyalty of current and former employees? The answer, Ericsson hopes, is a unique worldwide extranet portal called Zopps, which was launched in August.

While researchers have been aware for years that large Japanese companies gather information from employees and their families about products and ideas, it has never been done electronically via the latest Internet technologies. Zopps will break new ground in this respect.

Most companies have not caught on. Overwhelmingly, companies that actually have an extranet are using it strictly for business trade applications such as supply, distribution and peer contact. While the pressure is on for fast response to changes, studies by Forrester Research show that most companies attempting to launch just one extranet are met with a great deal of internal and external opposition. However, industry researchers predict that from the year 1999 through 2001, companies will be forced for their own survival to move beyond just one extranet application, and to participate in multiple extranets. Extranets are expected to dominate how business is transacted, and to be mission-critical by the year 2003.



Zoppy is the symbol and mascot for Ericsson's Zopps project.

Zopps falls into none of the common business trade categories of usage and, as such, makes Ericsson a pioneer on the forefront of extranet deployment — years ahead of the pack. Clearly, members of the Zopps team hope their proactive approach in developing and retaining talent will be paying off just when others wake up to the stark reality that there is a problem to which they must react.

## Talent crucial

According to a year-long study (The War for Talent) conducted by a team from McKinsey & Co. — a study involving 77 companies and almost 6,000 managers and executives — the most important corporate resource over the next 20 years will be talent: smart, sophisticated businesspeople who are technologically literate, globally astute, and operationally agile. And even as the demand for talent goes up, the supply of it will be going down. (The War for Talent by Charles Fishman, Fast Company, August 1998).

Another conclusion of the study is that with competition becoming more globalized, an increasing need for quick and cheap development of ideas, and the willingness of people to change jobs often, companies will have to be more imaginative in hiring, developing and keeping talent.

“Ericsson’s goal with Zopps is to complement the intranet as a knowledge network and new media development center. Zopps is open to the company’s current and former employees, their families, plus any approved partner,” says William Agostini, Corporate Intranet Manager at Ericsson. “This way, members can experience the Internet, understand The New Telecoms World, and change the company culture. They can take on-line courses, understand the new economy, and serve as usability testers for company technologies and software, while creating a global family.”

Since Zopps is geared towards home use, learning takes place mainly during leisure hours, without the workday pressures. This type of learning also results in substantial savings for all kinds of formal training and instruction, as well as payroll. Predictions for the U.S. are that the amount spent by companies on training IT professionals alone will be USD 2 billion by the year 2000 (U.S. Bureau of Labor Statistics).

While Zopps Global gives a world-view, and has English as its language of communication, the global concept involves gaining local awareness. As a result, Zopps also includes local Zopps Neighborhoods with their own dedicated Web sites, which are geared to the needs of Ericsson-related people in different countries. Zopps has pioneer neighborhoods in Australia, Finland, Spain and Sweden. These local Zopps have been operational for over a year, each with different content in its own language. Already Mexico, the United States, Malaysia, the United Kingdom, China, India and many other countries are looking to create their own Zopps neighborhoods. Membership can easily reach 250,000 individuals within a relatively short time.

## Password required

As an extranet initiative from Ericsson, Zopps is a closed or exclusive membership community and Web portal on the Internet. The Internet

carries public and private traffic, but a simple username and password provide protected access to the site. Content is directed towards Ericsson-related persons in all 140 countries. Major international news, entertainment, and information content partners are being chosen for their ability to satisfy the various needs of the Ericsson-only membership. Partnerships have been established with major online providers to present a palette of offerings to satisfy a large range of interests. Users of all ages are provided with numerous opportunities to interact, to chat, to exchange ideas. And if a user wants something that isn’t being offered, there are reminders all over the site to give feedback, send requests, give suggestions.

## News, technology and entertainment

Zopps general content areas currently include News, Technology, Entertainment, Campus, Kids, Lifestyle, and Shopping. More than 300 content providers (at a market value of over USD 500,000 per month) are offered to members, and exclusive original content is being constantly developed. Main and feature articles are written specifically for members, a Notes from the Edge column presents original “diary” entries from Cyberlabs and other Internet technology experts, and there is even a medical column called “Ask Dr. Bessmer,” written by a well-respected professional at the University of Nebraska Medical Center, which exclusively answers the health concerns of Zoppians. Forum areas provide plenty of opportunity for written debate and discussion, while chat rooms offer a more immediate way to communicate with other Zoppians around the world. There is email, a mentoring program, house-swapping, and of course, every Zopps Neighborhood is accessible from the Global site, encouraging even more communication and free flow of ideas.

A Web portal can be compared to an Internet convenience store, or a one-stop-shopping experience. You can search for information on the net, find great deals on all kinds of merchandise, chat, participate in forum discussions, download files, and pretty much do anything from one location that might otherwise take hours of surfing to do.

While Yahoo! and AltaVista are hugely successful horizontal portals, research has found that by targeting a specific group of users repeat visits are captured. These newer vertical portals are equivalent to magazines such as Surfing or Bride in the print world, while horizontal portals are analogous to a more general-interest magazine, such as Life. A vertical site with exclusive membership based on a common interest, and offering content specifically tailored to the interests of those members, is now expected to maintain the loyalty of its users. Its members feel they have something important in common with each other, and this bond keeps them coming back.

## Unique world concept

“As a unique world concept, and with the global, educated, targeted membership Zopps will have, the market value of Zopps as a world portal could be conservatively estimated at USD 24 billion,” explains Björn Thelin, CEO Info-cast AB in Stockholm.

The expertise Ericsson has gained in the design and creation of Zopps also has the potential to generate substantial earnings for Ericsson in a completely new arena with few competitors, as yet. By packaging existing product portfolio within Zopps, added value is also accrued to Ericsson. For example, Zopps Australia already has supported or tested the fol-



William Agostini, head of Ericsson’s intranet and Johan Ljungqvist, head of Ericsson’s internal communications, are the men behind the Ericsson Zopps project.

Photo: Lars Åström

lowing Ericsson products on their local Zopps platform: MultiMedia Content Hotel, Phone Doubler enabling Voice over IP, Edge Router, SMS Gateway, Communicator Online, DirecPC satellite Internet connections, Tigris Access Server, Cellular Digital Packet Data transfer of data via cellular telephony system, ATM switch, Webonair, and EBS web site hosting.

“The trick is in managing the raw information. The real challenge for Ericsson will be in how it chooses to organize and manage the feedback Zopps collects from this wide contingency, says Dan Dimancescu, of the Massachusetts research firm NextEra Enterprise, Inc. “The Web is unleashing the opportunity to tap the chaotic model. By opening itself to the widest array of input, Ericsson is following that chaotic model, one that makes sense for companies looking to be highly innovative. Extracting the real meaning is the real challenge.”

Maggie Curran

www.zopps.com



When the "Explorer Zip" computer virus hit Ericsson last June, it caused little chaos but made quite a stir. Over the summer, the company reviewed its procedures and took measures in order to be better prepared when it squares off against new virus attacks this autumn.

# The new virus scourge

**S**tig-Göran Flemström, Problem Manager at IT Services, explains that they received criticism from some of Ericsson's 100,000 employees regarding the way the situation was dealt with this summer, and that they have heeded the advice.

"We need to take a look at ourselves when these things happen. Psychological factors are very important. Many people make a big deal about viruses, even though they are not especially dangerous if one knows what to do and deals with the situation using established routines.

A review conducted in conjunction with Explorer Zip, a "worm" virus, showed that only a few users were actually infected. Of course it was bad enough that 9,000 people were affected in Asia, but it was hardly the catastrophe that was painted in the media and other places.

"It's all about attitude, really," explains Stig-Göran Flemström. "We're working on security issues and formulating directives and policies, but in order to deal with such a situation we need to have a functioning operating procedures in place. We developed a temporary solution in June which is being used until the long-term work is completed later this autumn."



Stig-Göran Flemström

## Analysis

IT Services now has an established routine which involves thoroughly recording incidents as they are reported. An initial analysis of the situation is then conducted prior to assembling a small team. The team consists of virus experts and other leading experts familiar with the applications and platforms which are potentially at risk. It is this team which makes operational decisions and determines the priority of cases. Should drastic measures need to be taken, that decision should be guided using a clearly established operating procedure.

The virus protection software will also be reviewed this autumn, on both the server side and in the Ericsson Standard Office Environment (ESOE).

According to Network Associates' virus expert, Klas Schöldström, more attacks can be expected in the future.

"Historically, viruses are created and then spread slowly to more and more people. Since the Explorer Zip virus was so destructive, it didn't have a chance to spread very far before being discovered. It knocked out entire systems, destroying itself in the process. We experienced seven cases of the virus, which isn't that many."

Klas Schöldström believes that as the handling of viruses becomes more routine we are being lulled into thinking that the situation is under control, while at the same time virus makers are becoming increasingly sophisticated.

## Virus hunter

He predicts that the greatest challenge to those battling viruses in the future will be the rate of distribution. Virus transmission has progressed from mainly through floppy disks only a few years ago to the point now where viruses have extensive global networks upon which to spread. Looked at that way, it's difficult to know how much the rate of virus transmission has increased. It's impossible to get an overview.

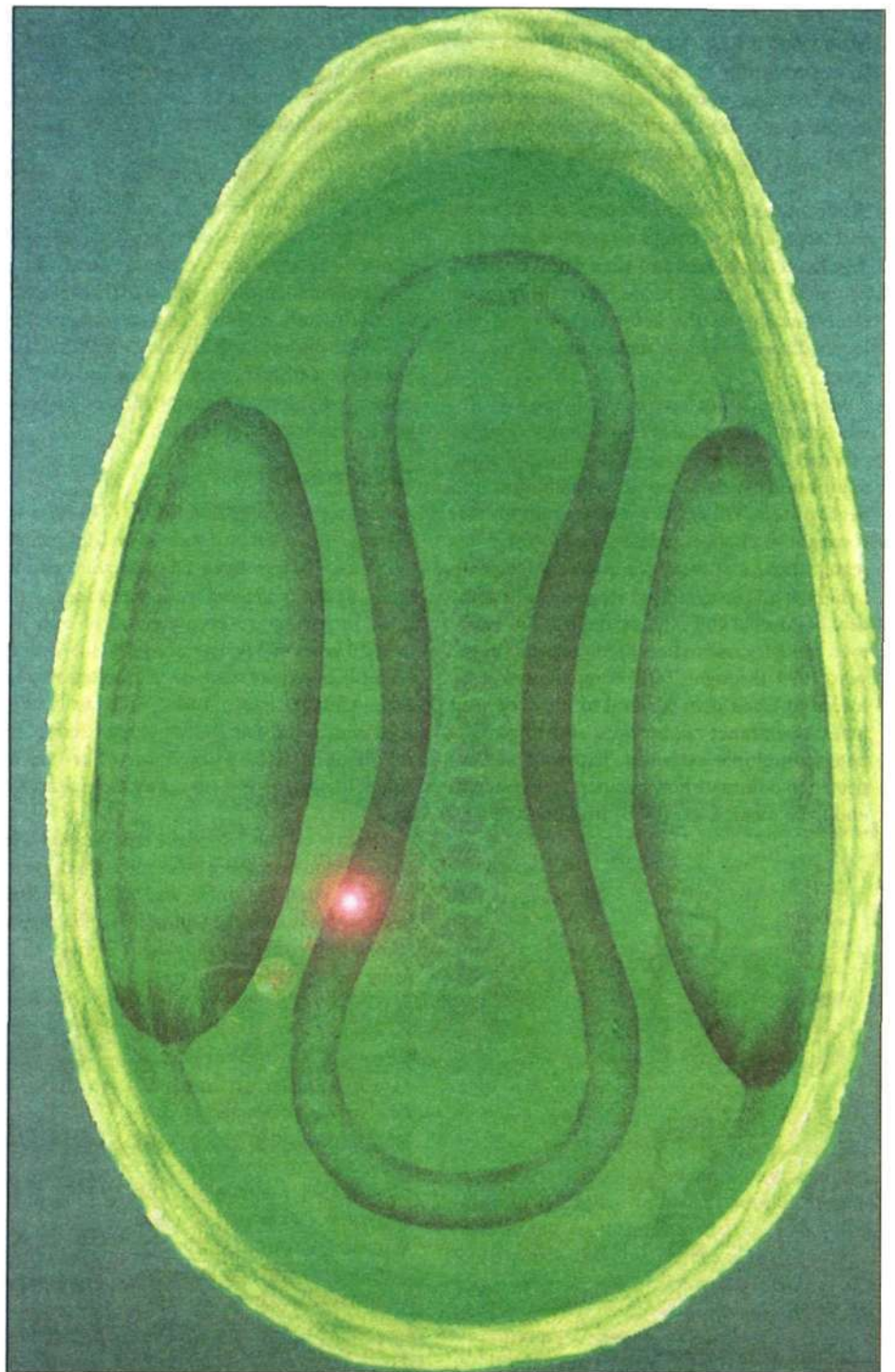
"At a company with over 1,000 employees, the average rate is about one infection per workstation per year, but nobody really knows today."

It is clear, however, that more people are falling prey to viruses. At the same time, more and more people have better and better protection against various kinds of viruses.

The worst environments, according to Klas Schöldström, are schools where games and other fun programs are constantly being downloaded from the Internet, and where many different people use the same computers.

From there, viruses spread to home computers from which they could eventually end up on the company's network. Installing virus protection software on computers at home is an easy way to protect against uncomfortable surprises, especially if there are many users in the family, suggests Klas Schöldström

Petter Schaffer



Virus is an appropriate name for the damaging computer programs that can spread among computers. Their transmission is quick, usually undetected and, like the smallpox virus in humans, capable of devastating consequences. Photo: Great Shots

## USEFUL VIRUS INFORMATION

**Virus:** Programming code that replicates itself (doesn't necessarily damage anything or cause trouble).

**Trojan horse:** A program that does something other than what one expects. These programs are named for the Trojan horse from Greek mythology. Like the residents of Troy, if we don't watch out we might find uninvited guests in our computers. An example of a Trojan horse is the Netbus program, which can open up your computer over the Internet to the person who gave you the program.

**Worm:** An independent program that spreads by copying itself from one computer to another. Like a virus, a worm may damage data.

**HTML virus:** Essentially a macro virus, this new type of virus searches a computer, typically a Web server, looking for HTML files to which it attaches a script. Although it was initially feared that the virus could replicate itself via Web pages downloaded by Internet Explorer, the virus can be controlled by security settings in the browser that prohibit access to the hard disk.

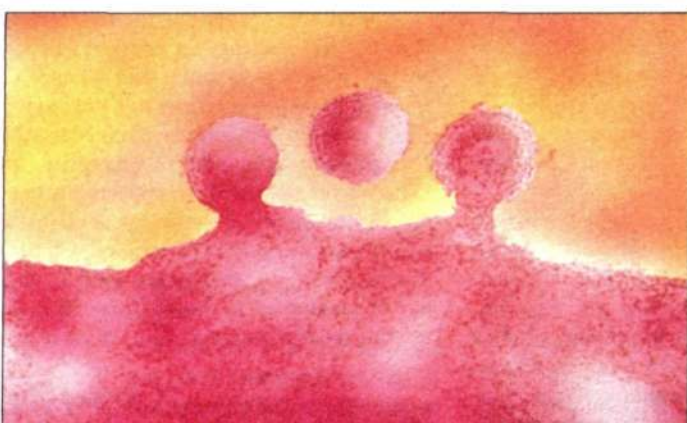
**Macro virus:** These are tiny Visual Basic scripts that can be created from within Microsoft Word or Excel. Macros are helpful to users for simplifying common tasks. A malicious user, however, can create macros to do more sinister things to others such as erasing or destroying files or replicating

themselves. Macro viruses may infect e-mail attachments but are not carried in the message.

**Melissa:** A so-called Word macro virus that spreads partly through Word files as well as by mailing itself to others using the Microsoft Outlook e-mail client. The virus itself causes very little damage in terms of changing the properties of other documents. Problems occur, however, when the virus begins sending itself to others within a company, which Melissa did last spring.

**CIH:** An ordinary file virus that affects the Windows 95 and 98 operating systems. The virus causes parts of hard disks to erase, making computers inoperable and forcing the reinstallation of system software, resulting in the loss of data. CIH struck on April 26 this year, the 13th anniversary of the Chernobyl catastrophe. There are several versions of this virus, but CIH is the most "effective".

**Explorer Zip:** This is a worm virus. Explorer Zip installs itself on a computer and systematically erases all files with a certain file extension (i.e. .doc, .xls, .ppt etc.). The virus also attempts to spread across the Internet and mails itself through e-mail. Explorer Zip can cause real damage on large networks where users have access to many files - almost everything can be erased if one is really unlucky.



The HIV virus is one of the worst known to man.