Adventures with Lara

Tomb Raider is one of the world's most popular computer games. In the movie version, to be released this summer, several Ericsson products are featured, including the Bluetooth headset. 8

Search for Ericsson's logo

The preliminary drawings for Ericsson's logo have been found and will be preserved for posterity. The trail leading to them was a winding one. It led from a now defunct company, via an unidentified man in a photo to a basement storeroom in London. 14–15

contact

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■ NO. 4 · MARCH 8 2000

Ericsson and Nokia have collaborated in the development of , Multimedia Messaging Service, MMS. In Cannes, Ulrika Jönsson and Sari Päivärinta demonstrated a test transmission of an MMS message between Ericsson and Nokia phones. Photo: Lars Åström

Broad support for multimedia messaging

News of MMS, Multimedia Messaging Service, drew the greatest attention at the GSM trade show in Cannes, France. MMS allows text messaging to be supplemented with sound, images, graphics, photographs and video.

Ericsson has made significant progress in this area and plans to launch its first MMS phone later this year. However, since it is in the interest of all the manufacturers to introduce the application as soon as possible, Ericsson and Nokia have been collaborating on the development work. **Cannes, 4–5**

Photo: Ecke Küller

Wireless comes to Oman desert

When Ericsson opened an office in Oman in 1973, there were no roads, much less a telephone network. Now Omantel, the country's only operator, is predicting that mobile networks will grow faster than fixed ones. Nevertheless, Omantel is preparing for competition. **16–18**

Key order from Korea

Korea's second largest Internet operator, Dacom, is replacing its Cisco routers in favor of routers from Ericsson.

"Our testing indicated that Ericsson's AXI 580 IP Backbone router was, without a doubt, the one that worked best," says Byungchang Choi, of Dacom. **7**

■ TECHNOLOGY

During the GSM trade show in Cannes, Ericsson launched its new Service Network server platform, which will make it easier for operators to handle the services and applications that are being developed for 3G networks. **26–27**

■ AT WORK

For a time, everything in his life revolved around customers, projects and deadlines. Then, one day, his house of cards collapsed and Peter Schantli was put on sick leave. Now, two years later, he has had time to reflect quite a bit on the isolation that many people on sick leave suffer. **28–29**

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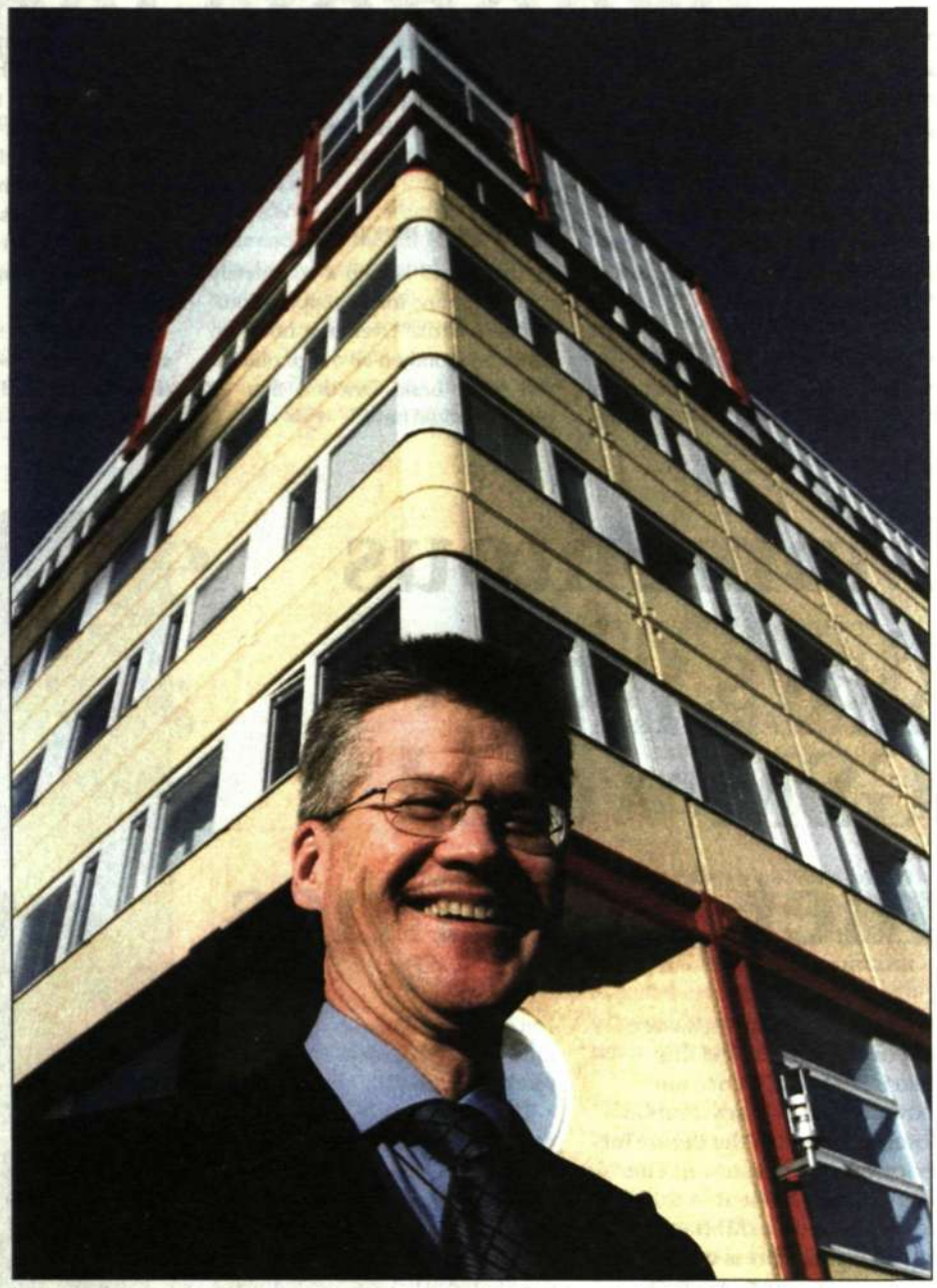
Full product rollout

For Lars Boman, President of the newly incorporated Ericsson Internet Applications, the hectic first few weeks on the new job are over. Lars Boman heads the Internet Applications unit, which with Internet Solutions previously comprised an entire division. *Contact* interviewed him about his thoughts on the future, and on the advantages of the new organization and its role in the company and in the market.



Lars Boman, new President of Ericsson Internet Applications, is looking forward to new and deeper cooperative projects during his first year at the helm. Photo: Lars Åström

➤ He has just concluded a telephone press conference. The alliance between Ericsson and IBM has attracted considerable interest, and thirty-odd journalists from different countries had called in. The companies have contracted to jointly develop mobile Internet services for the financial sector.

"The primary mandate of Internet Applications is to ensure that there are services ready to roll out for the mobile Internet. I believe strongly in mobile e-trading, and the cooperation agreement with IBM came at the perfect time. Our job is to link different solutions together so that they work end-to-end. As an end-user, I should be able to trust that the service is secure," says Lars Boman.

The reorganization is a minor, but key, change.

IBM is the latest in a string of partners. Another key partnership is the Ericsson Microsoft Mobile Venture. Lars Boman stresses, however, that Ericsson is not interested in developing all types of services. There is a strategy, based on the following five areas: e-business, positioning services, messaging services, multimedia services, and the development of multi-access portals. Service development will continue on a broad front within the Developers' Zone and the Mobile Applications Initiative.

"Currently, about 96,000 application developers have obtained our development tool from our web site, and slightly over 2,000 companies are formal members of the Developers' Zone," says Lars Boman.

During the first quarter, the unit will launch Service Network – the architecture and platform on which operators and service providers can build their Internet services.

Lars Boman compares it to a business tool. It gives the operator many new capabilities, such as the option of importing services from third-party developers, personalizing services and billing customers in simple manner. The User Service Center (USC) was an embryonic form of the Service Network. The ten or so customers using USC have shared their experiences. Compared with USC, the Service Network has more functionality, more capacity and a more open interface, thus offering customers greater ability to import the services they want.

"What makes Service Network superior is its broad architecture, its scalability and its accessibility. Our goal for this year is to deliver Service Network to 50 percent of all GPRS customers and 60 percent of all 3G customers with which Mobile Systems has system contracts. This means slightly more than 60 individual customer projects. Right now, we are focusing on strengthening delivery capacity. We need to train personnel in system integration – a task we are sharing with the Global Services division. The delivery capacity of the Flow Control Center in Linköping in central Sweden, for example, is expected to increase six-fold.

Lars Boman also points out the significance of Internet Applications products that are components of Service Network but that are also already generating major revenues when sold separately. Mobile databases are an example of such products.

The Home Location Register (HLR) enables the operator to identify subscribers' locations in the network. Between 250 and 300 million mobile subscribers are currently registered in HLRs delivered by Ericsson. Flex Number Registration (FNR) enables the subscriber to change telephone number from one operator to another. Mobility Gateway enables the operator to handle roaming between TDMA and GSM networks. The product is enormously popular in the US, where many operators have opted to take the GSM route in migrating to UMTS.

Intelligent Networks comprise a large product family that includes Service Control Points (SCP), Service Data Points (SDP) and several network services, such as premium rate, freephone and Virtual Private Networks (VPN). VPN enables users to use speed dialing for internal cellphone calls.

Prepaid subscriptions are another business-critical product also sold separately to a considerable extent. Today, 42 percent of all GSM subscriptions are prepaid, and Ericsson is world-leading in the area. Lars Boman believes prepaid subscriptions will become a key element of Service Network, and with the advent of 3G, operators will become even more keen on having control over revenue. So, prepaid revenues are attractive for the customer as well.

"It's a payment method that helps track costs. With mobile Internet, it will become even more important."

The new organization and the separation of the Internet Solutions and the Internet Applications units do not involve any major change for employees.

"It is a minor, but key, change. We have a clearer profile internally, as well as towards customers. For the customer, it is logical to have services provided by Global Services. Those who previously did business with Internet Applications will continue to do so."

Lars Boman expects close cooperation with all divisions to continue.

During the year, we will also extend collaboration with Multi-Service Networks. They need Internet services, and we also develop services for fixed Internet. That's why our operations are called Internet Applications and not Mobile Internet Applications."

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FACTS/LARS BOMAN

Family: Wife Inger.
Home: Stockholm.
Birthplace: Umeå.
Background: Long career within Ericsson, including periods as technical and product manager for Ericsson in Japan and as president of Ericsson Infotech in Karlstad.
Hobbies: Golf, long-distance skating and skiing when time permits; enjoys spending a day off strolling around downtown.

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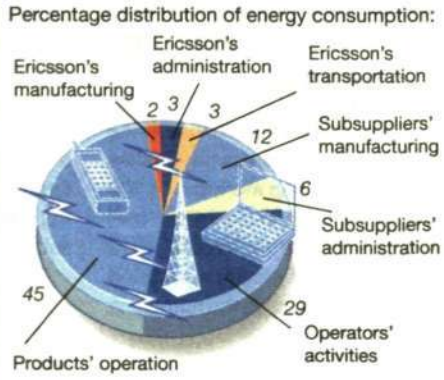

Multimedia messages

Next-generation SMS messages will support the exchange of messages that combine text, graphics, images, sound and video. The new open standard is called MMS, and at the GSM exhibition in Cannes, the world's first MMS message was sent between an Ericsson and a Nokia mobile phone.

Ericsson will have a phone on the market before year-end that can handle MMS. It will be a GPRS phone with an MMS application, according to Fredrik Öijer, strategic product manager for messaging at the GSM/UMTS business unit within Ericsson's Consumer Products division.

Completely new phone

"Ericsson will launch a completely new telephone for this application," reveals Fredrik. "Over time, however, it will be found on all our phones. It will be a basic function that all phones should have."

MMS stands for Multimedia Messaging Service. The idea is that this should become the same success that SMS is today. Text messages can be augmented with sound and images. MMS will be able to transfer multimedia messages between cell phones using WAP. Editing the contents of a message will be equally easy.

According to several consumer studies that Ericsson has conducted, the ability to send visual messages is one of the most attractive applications. Ericsson is in the forefront in this area, but it is in the interests of all manufacturers that this application is made available as soon as possible, and Ericsson and Nokia have therefore worked together to define how it should be implemented.

Interoperability

"One of the primary objectives with the live demonstration conducted in Cannes was to show operators that interoperability between manufacturers is possible. It is important to show that it is possible to send MMS messages between phones from different manufacturers. Everyone should follow the same standard," says Fredrik Öijer.

Although this is an application for next-generation systems, MMS is not dependent on any specific network for its functionality. Both 2G and 2.5G networks will work.

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Momentous days when GSM world met in Cannes

Mobile Internet and 3G were important themes for this year's GSM conference and exhibition in Cannes. Mobile Internet was also the theme for Ericsson's participation. This was not only evident in the company's two exhibit stands but also at the press conference, which was opened by Mats Dahlin, head of the Mobile Systems division, who gave a practical demonstration of how the mobile Internet can be used.

The GSM exhibition in Cannes grows in size and importance for each year, and yet another exhibition hall had been added for this year's show. This exhibition hall housed many smaller application developers, of whom a disproportionately large number were from Israel.

Ericsson had also increased its presence and was represented through a large stand in one of the exhibition halls and in one of the pavilions outside the halls. The indoor exhibition featured applications and terminals, while the outdoor demonstrations focused on Edge, UMTS and GSM on the Net. Ericsson also provided its own GPRS coverage throughout the exhibition area.

Just as during previous Cannes exhibitions, Ericsson arranged several customer seminars. For the first time, a special seminar was held this year for invited TDMA customers.

The objective was to create understanding for GSM/GPRS/Edge/UMTS and to describe Ericsson's migration strategy for 3G.

"This was not a detailed technical presentation, but rather a simpler description of market trends and the evolution of GSM towards Edge and WCDMA," relates Marie Svensson, who works with strategic marketing at the business unit for GSM, TDMA and Edge.

During these customer seminars, TDMA customers were also able to meet management for the GSM, TDMA and Edge business unit for the first time.

"Our seminar was very well received and was quickly overbooked. Most of the participants came from Latin America," continues Marie Svensson.

Well-frequented Internet café

Ericsson hosted an Internet café at the Cannes exhibition, which was strategically located between two exhibition halls. This was obviously a popular attraction, as guests queued for computers.

As in previous years, there were many speakers during the three-day exhibition who are well known profiles in the cellular industry.

Sir Richard Branson, founder and chairman of Virgin, drew a full house for his presentation of Virgin Mobile, UK's first virtual mobile operator. This company, which was founded in November 1999 and has a partnership with mobile operator One-2-One, is the UK's fastest growing operator in terms of numbers of subscribers.

The GSM exhibition is an event whose importance increases for each year, as does media interest. Many of the journalists also came to Ericsson's press conference, which was opened by Mats Dahlin, head of the Mobile Systems division, who received a call on his mobile phone with an image of his two children asking him to bring chocolate home from Cannes.

"Mobile Internet was Ericsson's theme at the exhibition, and with the message to Mats, we wanted to show how it might be used practically in everyday life," explains Pär Altan, communication director at Mobile Systems.

Today and tomorrow

At the press conference, Mats Dahlin and Sandra de Brito, who is the key account manager responsible for 3G for British operator BT, reviewed Ericsson's year-end report for 2000 and provided a glimpse of the future. Although Ericsson did not present any new phones at the Cannes exhibition, Mats Dahlin was able present other news.

Among these announcements were that Ericsson will develop GSM 800 and that important partnerships have been established with universities in Stanford in the US and Lund in Sweden.

The GSM exhibition is very evident in street life during the three days that the show is held. Men in suits talking on mobile phones are everywhere, and most evident on the Cronisette, the main street facing the beach.

On the other hand, the GSM World Conference is not just a show and a conference, but rather an opportunity to meet customers and colleagues and to make new contacts.

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When the GSM exhibition gets under way in Cannes, men in suits with mobile phones are a common feature of the Croisette, the famous main street facing the Mediterranean. Some exhibitors use robots and other imaginary characters to attract visitors to the exhibition.

FACTS/3GSM WORLD CONGRESS

More than 20,000 people visited the 3GSM World Congress in Cannes and there were also more than 6,100 delegates from 104 countries present. Some 338 operators were represented and exhibitors totaled 468, more than double the number in 2000.

GSM 800 development may create global standard

At the recent GSM World Congress, Ericsson announced that it will develop GSM for the 800 MHz frequency band. Commercial products for this standard will be available during the second half of this year.

Several mobile operators in North and South America have decided to deploy a GSM/GPRS system in parallel with their existing TDMA systems. First out was AT&T Wireless, in November last year.

"Previously, TDMA and CDMA were the only standards used on the US frequency bands, but now that GSM is being introduced, it has a chance to become a global standard," says Filip Lindell, manager for system strategy at the GSM, TDMA and Edge business unit.

"Developing GSM 800 is not a major undertaking technically, as it is more of a product variant."

Standardization work is also unnecessary, since the European standards body ETSI approved GSM 800 several years ago.

Although GSM is now being introduced in traditional TDMA markets, this does not mean that TDMA and CDMA will disappear. Major expansions, particularly of TDMA networks, are taking place in Mexico and Brazil.

"Predicting the future is difficult, since end users, meaning subscribers, will drive development," notes Filip Lindell. "Users for whom voice services are sufficient will undoubtedly stick to TDMA networks, while users who want various data services will choose GSM. With respect to terminals, there are many more products for GSM than for TDMA."

Those who choose GSM 800 will also be able to roam to other systems using multi-band phones. The services that will be available on GSM 800 will be easy to integrate with the service found on all other GSM networks, regardless of frequency.

Gunilla Tamm

Photo: Lars Åström

New package with 3G tests

TRAM is a package that will help operators roll out their first 3G networks. The package components were demonstrated for customers for the first time at the 3G show in Cannes.

TRAM, Tools for Radio Access Management, is a PC-based package of software tools that support planning and testing of WCDMA networks. TRAM contains four different tools: WCDMA Planner, Transporter, Optimizer and TEMS-investigation.

"Planner helps an operator to determine how many base stations are required to provide coverage of a given area with a WCDMA network. Transporter provides support for correctly dimensioning the network, while Optimizer handles fine-tuning of the network. TEMSinvestigation is a quality-control tool that determines if the network has sufficient range," explains Mikael Halén, manager of the Wideband Radio Networks product unit within Mobile Systems.

The Planner and the Transporter have been available for several months, but the other two tools are completely new. The new tool package is now being launched for operator systems based on Microsoft Windows NT software.

"Most operators' 2G systems are based on Windows NT, and customers have therefore requested that the new tools also support this operating system," says Mikael Halén, adding that interest was substantial when Ericsson demonstrated TRAM in Cannes.

"People crowded around the booth. Many operators are now planning their 3G networks, and these tools are clearly a hot product at the moment," concludes Mikael Halén.

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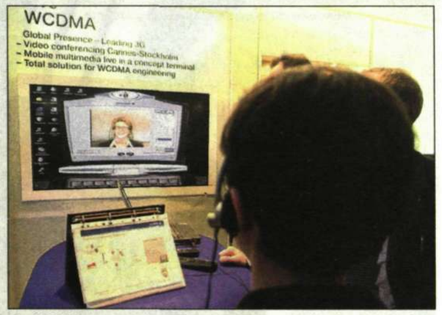

The WCDMA Democenter in Kista was connected with the exhibition in Cannes. Visitors were able to follow the demobus as it drove around in snowy Kista.

Huge contract signed with Taiwan

Taiwan operator Far EasTone recently signed a framework agreement with Ericsson valued at USD 325 million. The contract covers upgrading and enhancing the operator's GSM/GPRS network during 2001.

Far EasTone is Taiwan's largest mobile operator and one of the fastest growing in Asia. The major network expansion now being started is needed to increase geographic coverage and to be able to offer new mobile Internet services to the operator's rapidly growing customer base.

The equipment that Far EasTone is purchasing for its GSM/GPRS system includes the latest GSM solutions, such as Mobile e-Pay and Safetrader, Mobile Positioning System (MPS) 3.0, GSM on the Net and WAP 3.0.

Far EasTone was one of the first wireless operators to choose Ericsson's GPRS system.

"The Taiwanese are quick to adopt new technology and very sophisticated in using mobile services," says Jan Signell, president of Ericsson Taiwan.

"As data and telecom services increasingly converge, it is important that operators are able to offer services that are meaningful and easy to use. To be able to do so, the operator must have the right network," says Joseph O'Konek, President of Far EasTone. "Ericsson is a long-standing business partner, and we believe that the company will deliver the network quality that we need to meet the demands of our customers."

The operator placed its GSM network into commercial operation in January 1998 and currently has more than five million subscribers. Ericsson and Far EasTone have worked together since 1996.

Gunilla Tamm

Broader platform for mobile Internet

Ericsson's Service Network was presented for operators and service providers at the GSM show in Cannes. This solution is based on servers that together provide a platform for Internet applications.

"This is a tool that allows operators to extend the mobile Internet to the consumer market," says Lars Boman, President of Ericsson Internet Applications AB.

The Service Network makes it easy for operators to integrate new services and get them working commercially quickly. Included in the Service Network are such applications as positioning, messaging, secure payment systems and e-commerce.

The operator can partner with any third-party developer. Open interfaces make it possible to quickly integrate new services.

Operators can offer end users a variety of personally configured services that are available on both fixed and mobile terminals.

Ericsson is giving customers an opportunity to select themselves how extensive a version of the Service Network they wish to purchase. Operators who develop their own services and portals can buy components separately as required.

Those desiring a higher level of service can purchase a package that Ericsson will help them integrate. Ericsson can also offer a complete package for operators who want portals, applications and support in developing and integrating everything all the way down to the end user.

"Our goal is to help operators to profit from the mobile Internet," says Lars Boman.

Ericsson's Service Network is designed for all types of networks. When it is completed, it will work in GPRS networks and can be upgraded for tomorrow's 3G systems.

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Better protection for laptops

>> Pointsec 4.0 is a new solution from Global IT Services that will make it more difficult to break into the laptop computers of Ericsson employees. A unique password and user ID allows only the user access to the hard drive.

Pointsec is designed for laptop PC computers and protects the data on the hard disk as long as the hard disk is encrypted.

Improved Jalda uses new Safetrader

>> Improvements have been made to Ericsson's and Hewlett-Packard's Jalda payment system by incorporating a new version of the Safetrader payment server.

Jalda enables micropayments over both fixed and wireless Internet connections. The system is based on a trusted third party using Safetrader to oversee account transactions between service providers and customers.

The new version of Safetrader includes greater scalability and an interface between service providers and customers that can be offered in any language.

GSM Pro focuses on UMTS

>> GSM Pro is expanding its reach and will now also focus on UMTS operators. The unit will continue to develop new functions and expand the existing GSM Pro concept. One of the primary strategies is to offer electronic group communication services to the general public.

An example of a situation where this kind of service would be useful is communication between a security company and a control center.

Less dramatic situations can also be envisioned, such as using the service for simple conference calling among friends. The R250sPRO will remain on the market until a new terminal is launched.

Settler invoices roaming traffic

>> Ericsson's and Hewlett-Packard's joint venture company, EHPT, has sold its Settler solution to Danish operator Sonofon and Pakistani operator Mobilink GSM. Settler is a system that is designed to help operators register and invoice roaming traffic on their network.

The solution also helps them to check that invoicing from other operators is correct.

Bluetooth-based hotel service

>> Ericsson, in collaboration with the US software firm Registry Magic, recently conducted a joint demonstration of the world's first Bluetooth-based service for hotel guests.

At the Holiday Inn Wall Street in New York, financial and trade press representatives were able to view a demonstration of how guests can check in, unlock the door to their hotel room and pay their bills using Ericsson's R520 Bluetooth phone.

The services were also demonstrated at the Internet World Wireless trade show held in New York on February 21–23.

Endurance yields record ADSL order

Ericsson in Denmark recently secured Ericsson's biggest ADSL order to date. The order means that the buyer, Tele Danmark, will see a five-fold increase in its current ADSL capacity, which provides broadband over existing phone lines.

"This is the most exciting thing I've been involved in at Ericsson. The order marks a breakthrough in the datacom area for Ericsson in Denmark, and is also of major strategic importance for Ericsson worldwide," says Flemming Christensen, key account manager for Tele Danmark.

Ericsson's sales team put a large amounts of hard work into this order.

"We started over a year ago, lobbying Tele Danmark's engineers and management. They were especially impressed by our Engine concept," says Flemming Christensen.

The situation looked bleak last autumn, however, when Ericsson was ruled out as a supplier. At the time, Tele Danmark felt that the technology did not meet its expectations.

But Ericsson in Denmark persisted and submitted a bid despite the setbacks. At the same time, demand for ADSL was increasing. Tele Danmark decided to speed the process along, giving Ericsson another chance. Ericsson met that challenge and, upon reexamination, demonstrated that its technical solution delivered what it promised.

"It's been a very volatile situation. One day, we've all been extremely positive, only to swing to the opposite extreme the next. But we've had 'think the unthinkable' as our motto. This, combined with a passion to win, yielded results," says Flemming Christensen.

"We're extremely happy today and a champagne bottle or two have been cracked open," he says.

This spring, the first 20 facilities will be installed in Denmark's largest cities, Copenhagen and Århus, followed by the rest of the country.

Ericsson is already in negotiations for other contracts in the datacom field, this time involving ATM, IP, Voice over IP, Remote Access and High-speed DSL.

"We are clearly in a better position now for current and future negotiations than we were prior to securing the ADSL contract," says Flemming Christensen.

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Sweden's Minister for Industry, Employment and Communications, Björn Rosengren, was one of the visitors to Ericsson's display during the EU ministers' meeting in Luleå. Here, Ericsson's Carina Lundqvist explains how WAP works. Photo: Per Pettersson

EU ministers try out mobile Internet

When the EU's labor and communications ministers met in Luleå, Sweden, in mid-February, the major issue discussed was how to alleviate the acute demand for skilled IT workers from industry.

"This is a major problem that we need to solve. In recent years, many engineers have moved to the US. Furthermore, we have too few women in the IT sector," says the EU's IT Commissioner Erkki Liikanen.

One way to relieve the shortage is to look towards Eastern Europe, where some of the world's foremost mathematicians and programmers can be found, according to Erkki Liikanen.

"It is critical that we have access to qualified employees," says Johan Siberg, Executive Vice President, Corporate Office Sweden.

Ericsson, an official supplier during Sweden's EU chairmanship, also organized an exhibition where the ministers could see demonstrations of the latest mobile Internet technology.

Lars-Magnus Kihlström

Broadband Ethernet breakthrough

A general agreement with Skanova has given Ericsson the green light to start supplying its broadband Ethernet technology for residential applications.

This is the first time that an established operator – Skanova is owned by Telia – is to construct a network of this type.

"Skanova has declared that it aims to connect 600,000 households," says Per-Olof Sjöberg, head of Residential Communication Services, a unit within Ericsson Business Innovation, with a strategy focused on broadband and IP.

Discussions are currently underway with other operators regarding sales in several markets in Europe.

This Ethernet technology offers operators and end users data transmission over fiber-optic cables that are unequivocally the fastest in the market. Furthermore, traffic via these cables moves equally fast in either direction.

"Ethernet offers a faster Internet connection, with all that entails. It also provides opportunities to develop entirely new kinds of services, such as interactive services based on images," says Per-Olof Sjöberg.

The technology requires operators to construct a new network, which involves major initial investments. Residential Communication Services is therefore primarily concentrating on delivering broadband to multi-unit housing.

To date, 15,000 lines have been installed in Sweden.

The contract with Skanova is a general agreement extending over several years, which explains why Per-Olof Sjöberg does not yet know how large the final contract will be.

Other companies in the field are closely monitoring what Telia does. With this contract in its pocket, Residential Communication Services will now start a massive sales campaign, aimed primarily at new and established operators in Western Europe. Discussions are already underway with operators in Italy, Spain and the Netherlands.

"We are already seeing concrete results, and we haven't even started a serious marketing campaign yet. Telia is to be congratulated for being the first to select Ethernet. Over the long term, that will be the winning network structure," says Per-Olof Sjöberg.

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Prestigious deal with Korean operator

Ericsson routers will replace old Cisco routers at Dacom, one of Korea's largest Internet Service Providers.

"Ericsson's offer was definitely the best alternative," says Byungchang Choi, CEO of Internet planning at Dacom.

"Ericsson offered the best quality at the lowest price."

Dacom is Korea's second largest Internet operator, controlling almost 40 percent of the total market.

Photo: Lisa Selin

Dacom is the second largest Internet Service Provider in Korea, with at least 40 percent of the total market.

There has been an explosive development in the demand for Internet services in Korea.

To meet the customers' needs Dacom has had to double the capacity of its network at least twice a year.

Dacom's Internet service has recorded a growth rate of 200 percent since it was launched in slightly more than six years ago.

Byungchang Choi

"Here in Korea, Ericsson is regarded as the strongest player in mobile communications. We at Dacom look forward to extended cooperation with Ericsson in this area," says Byungchang Choi.

Korea is now tenth in the world for Internet usage, with 20 million users. Korea also has a leading position in the area of broadband Internet, with over 3.5 million households connected at the end of 2000.

"We are extremely proud that Dacom has chosen Ericsson's Packet Backbone Network. And we are confident that the equipment we provide will enable them to meet the rapidly increasing Internet service demands," says Mike Thurk, executive vice president of Ericsson's Data Backbone and Optical Networks division.

Six Cisco routers will be exchanged for Ericsson's AXI 580 IP Backbone routers.

"Our tests show that these routers have the best performance," says Byungchang Choi.

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Blip – the next level of the mobile revolution

Blipping. Remember that word. The next phase of the mobile revolution is coming. Communication over extremely short distances. Bluetooth is the technology, Blip is the name of the product and the applications are almost endless.

Blip is being developed by Venture Alfons, one of the microcompanies that was started up under the Business Innovations umbrella.

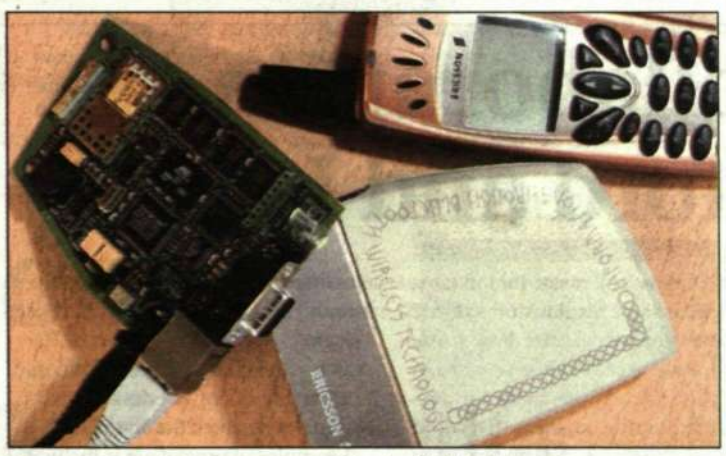
March 22 is D-day. Although the Swedish market has already seen a preview demonstration, CeBIT marks its official international debut. Blip demonstrations will be conducted at Ericsson's large display, to the assembled telecom world. Blip is a unique product and marks the beginnings of a new market.

From a purely technical standpoint, Blip is relatively simple. It doesn't involve much more than some memory, a processor and a Bluetooth chip. But Blip opens up a whole new world of applications. With an ordinary mobile phone or a handheld computer equipped with Bluetooth, anyone can receive information about practically anything, using Blip as an access point. It serves as a tiny base station for mobile communications over extremely short distances, currently ten meters or less. The short range is actually one of Blip's strengths and forms the core of the concept.

The concept involves units being set up in various locations: stores, bus stops, billboards – essentially anyplace where there are people who need information. Peter Lundin, general manager for Venture Alfons, uses the following scenario as an example:

"Say, for example, you are arriving in an unfamiliar city. Blip units are set up in the central railway station, providing information. You receive information about where hotels are located and whether they have any rooms available. Once you've checked in and are on your way to some attraction, you receive lots of information about it right to your mobile phone."

The first commercial application for Blip will be in advertising. Peter Lundin and his colleagues at Venture Alfons are collaborating with the world's largest owners and sellers of advertising space, Clear Channel Information. Their concept involves equipping ordinary billboards with Blip units that can send information to the advertising consumer's mobile terminal.



A processor, some memory and a Bluetooth chip. Using these components, combined within the shell of the Blip unit, a completely new world of applications awaits.

Blip buyers will be those entities who wish to provide information, such as bus companies, or shopkeepers who want to provide added value to window shoppers.

The first general version of Blip will be launched at CeBIT. Eventually, greater volumes will be produced and more specialized versions added to the product line. It is hoped that Blip will be at the center of an entire family of products with various capacities and tasks.

Niclas Henningsson
freelance journalist

FACTS/**THIS IS BLIP**

Blip is an open platform built from standard commercial components. The unit, about the size of one's palm, sends information via Bluetooth at a speed of 750 kpbs. Every Blip can send information to eight mobile phones or handhelds simultaneously. Using multiple terminals at the same location could allow up to 80 users to simultaneously access information sent using the WAP standard. Blip is equipped with the Linux operating system.

HELLO THERE...

Photo: Berit Byström

Maria Khorsand

...who was recently named head of the newly-formed company Ericsson Technology Licensing in Lund. The company, which employs 170, researches, develops, markets and sells Bluetooth technology. Maria Khorsand previously worked at the Data Backbone and Optical Networks division, where she was responsible for IP telephony.

Was it a difficult decision to accept this job?

"No, Bluetooth is such for exciting technology and there are so many products and services that it can be used – it marks a shift in technology. Imagine a wireless world, where all the gadgets can communicate with each other as soon as they come into range. We'll be able to discard all those remote controls and replace them with a phone, or whatever it is we're going to call it in the future. "

"It won't be long before we'll be able to pay in the grocery store or turn on the coffeemaker or stove using our phone – or even have a camera communicate directly with the phone."

What are the most important issues this year?

"There are three main issues: proactive marketing, sales and delivering products on time. We have the right products, we manufacture them in a timely fashion – now we need to get them established in the market while we still hold a clear technological lead. The people who are working at the company are extremely motivated to achieve these goals."

What kind of experience did you bring with you from previous position?

"I've learned how to motivate my employees and get them to be passionate about their jobs. I've also formed an extensive network of contacts within Ericsson. And I've learned how to market and sell a new technology and create demand for new products."

Why are there so few female managers at Ericsson?

"I think it's largely to do with old, ingrained habits. Initially, every change or difference is viewed as taking a risk. Until now, selecting a man for a managerial position has been viewed as a safe bet. It seems, however, that the trend has now changed at Ericsson with more women holding senior-level managerial positions."

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Lara Croft uses Bluetooth headset to find treasures

100 million people have played the computer game Tomb Raider . Now, it is the inspiration for a full-length feature film with the same name. Ericsson isn't missing the chance to provide main character Lara Croft with a Bluetooth headset and other products to help her find treasures and solve problems.

Tomb Raider is one of the first games to combine problem-solving with action and adventure. The game, released in 1996, was the first to feature a woman, Lara Croft, as the main character.

The computer game provides the basis for the film *Tomb Raider*.

Actress Angelina Jolie, whose earlier films have included *Girl, Interrupted* and *The Bone Collector*, will play Lara Croft. The character seems to be the traditionally stereotypical perfect woman at first glance – tall, slim, beautiful and friendly. But Per Söderström, project coordinator for the film, claims that Lara Croft is modern in every way.

"She is truly 21st century – young, tough, active, courageous and independent. Besides that, she is morally upstanding. Most of the treasures she finds, she donates to museums. If she'd been a sex symbol, Ericsson would never have placed its products in the film," Per Söderström says.

In the film, Lara Croft searches for treasures and solves problems. A number of Ericsson products are available to help her, including the cordless Bluetooth headset.

"Ericsson wants to demonstrate that the company's products help the consumer manage day-to-day problems more easily."

His interest was sparked when he heard that a movie would be based on the computer game Tomb Raider.

"We reach a young audience – one of our most important target groups. We believe that many who have played the game will go and see the movie out of pure curiosity. Besides, it seems natural to have Ericsson products prominently displayed in the movie, just like during the Bond film *Tomorrow Never Dies*."

One of the lessons learned during the Bond project was that products shown in the film should already be out and available in stores. Ericsson has definitely taken heed of this for *Tomb Raider*. Product placement in a movie has enormous breakthrough potential and when the Bond movie was released, knowledge and brand recognition also improved.

"At the same time, it's important to have balanced expectations. Product placement must be done right, otherwise the consumer will be offended – they don't want to see just advertisements. It's marketing and offers in conjunction with the move that give the most reliable result for the company," explains Per Söderström.

The film's Los Angeles opening is scheduled for June 15. The Stockholm premier is June 20, followed by London on July 6. The film will be screened in a total of 60 countries.

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Angelina Jolie plays Lara Croft in the film *Tomb Raider*, scheduled to open in June and July.
Photo: Paramount Pictures

Unique collaboration with Stanford and Lund

Ericsson has initiated collaboration with Stanford University in the US and Lund University in Sweden in the field of Supply Chain Management.

Many of the collaborative arrangements that Ericsson has entered into with various universities have been in the technology field. This time, however, the collaboration involves the field of supply, which is undergoing major changes.

"What happens when we outsource and how should we deal with supply as the sale of services and total solutions become increasingly important? These are two areas in focus, in which both Stanford Professor Hau L. Lee and Lund Professor Sten Wandel are actively conducting research," says Crister Ek, head of Supply Chain & IT Management at the Mobile Systems Division.

"There's a wealth of experience here that is extremely valuable, as well as a large amount of analytic knowledge that we can draw from. In addition to receiving assistance in adapting our supply chain for outsourcing or other changes that could occur in the future, we can also have our work methods verified and receive suggestions as to how to make improvements. At Ericsson, we're busy with our day-to-day work and sometimes don't allow ourselves sufficient time margins."

Ericsson Supply Chain Academy is the name of the research program that Ericsson is conducting together with the universities in Stanford and Lund, a program in which Ericsson plans to invest USD 7.5 million over the next five years. This collaboration is probably one of the first of its kind.

Practically speaking, the collaboration between the company and the universities involves doctoral students from Stanford and Lund conducting projects together with an experienced employee from Ericsson over a six-month period. This employee is assigned to a Visiting Industrial Research Associate (VIRA) position. Christer Lundberg at Ericsson Radio Systems was named the first VIRA.

Examples of project areas include capacity planning and forecasting, product packaging and variation management.

"Over the past ten years, the subject of Supply Chain Management has been transformed from a purely academic one to becoming a very important field for many large global corporations. Having employees from Ericsson here on campus means that we can benefit from their practical experience of our research. The collaboration that we have with Ericsson is a new approach," says Professor Hau L. Lee.

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Uniform network will save money

A global project is currently underway to make Ericsson's internal network more uniform. It is estimated that standardization will save at least USD 8.5 million per year.

EriNet, Ericsson's internal WAN (Wide Area Network) is used daily by up to 100,000 Ericsson employees worldwide. Currently, Ericsson's local companies oversee their own national WAN:s and LAN:s, and many of these operate using separate standards and interfaces. This creates problems, especially when errors occur in the network.

"Local companies usually only oversee their portion of the network, with nobody having an overall picture. It can therefore be difficult to localize a problem, resulting in excessive delays before a problem is fixed," says Göran Herwin, project manager for the One EriNet program.

One EriNet is being implemented by Ericsson Global IT Services, with the aim of creating a common standard and interface for all WAN:s and LAN:s. One of the goals is for Global IT Services to have the option of monitoring the entire network. Standardization pertains to the network's switches and routers.

Currently, the internal network consists of components from a number of suppliers. The goal is to create a system that consists largely of Ericsson products. The One EriNet program was initiated last October and has just completed its first phase.

"We've developed a proposal for standards that will be tested in India and Turkey during the month of March," says Göran Herwin.

Project managers believe that these measures will result in savings of at least USD 8.5 million annually for Ericsson, primarily in the form of increased efficiency in problem solving and smoother network operations.

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Pirate copies a serious threat to telecom industry

Every year, Ericsson and its competitors lose billions in revenue to pirate copies of products.

In its quest to hunt them down, the company has hired a full-time consultant to track down knock-offs around the world.

Consultant Mikael Eriksson has been working for about a year in the Consumer Products division. He employs detective agencies in various parts of the world to follow up on tips and investigate suspect stores and distributors. They also conduct random checks at various retailers.

Based on these results, local police or customs authorities are tipped off so that they can take countermeasures such as raids on premises. Last year, Mikael Eriksson's work led to four raids in Sweden and about a hundred confiscations around the world.

In addition to receiving tips, the Internet has also proved to be an important source for tracking retailers.

Highly dangerous

In some cases, the use of pirate copies can be highly dangerous. In Sweden, there was a report in the news last November of a woman who had received a shock from a charger sold under the Ericsson name.

It did not take many minutes in the company's mobile phone lab in Lund to determine that the charger was a pirate copy.

Mikael Westmark

"I've seen myself what the insides of charger copies look like and it's not a pretty sight – many look like rats' nests with bunches of twisted wires. You don't need to be an engineer to see that," says Mikael Westmark, head of communications for the Consumer Products division.

He fears that pirate copies convey a positive image to some people, who feel that they are getting the same product at a lower cost.

"Actually, using a copied charger is highly dangerous, since we're talking about an electrical appliance here. One reason why the genuine product costs a few dollars more is that it is tested to ensure that it can meet to certain safety standards," says Mikael Westmark.

Serious attitude

The Consumer Products division takes a serious attitude towards pirate copies for several reasons, including the fact that they are dangerous to consumers and that the telecom industry is losing billions to this practice.

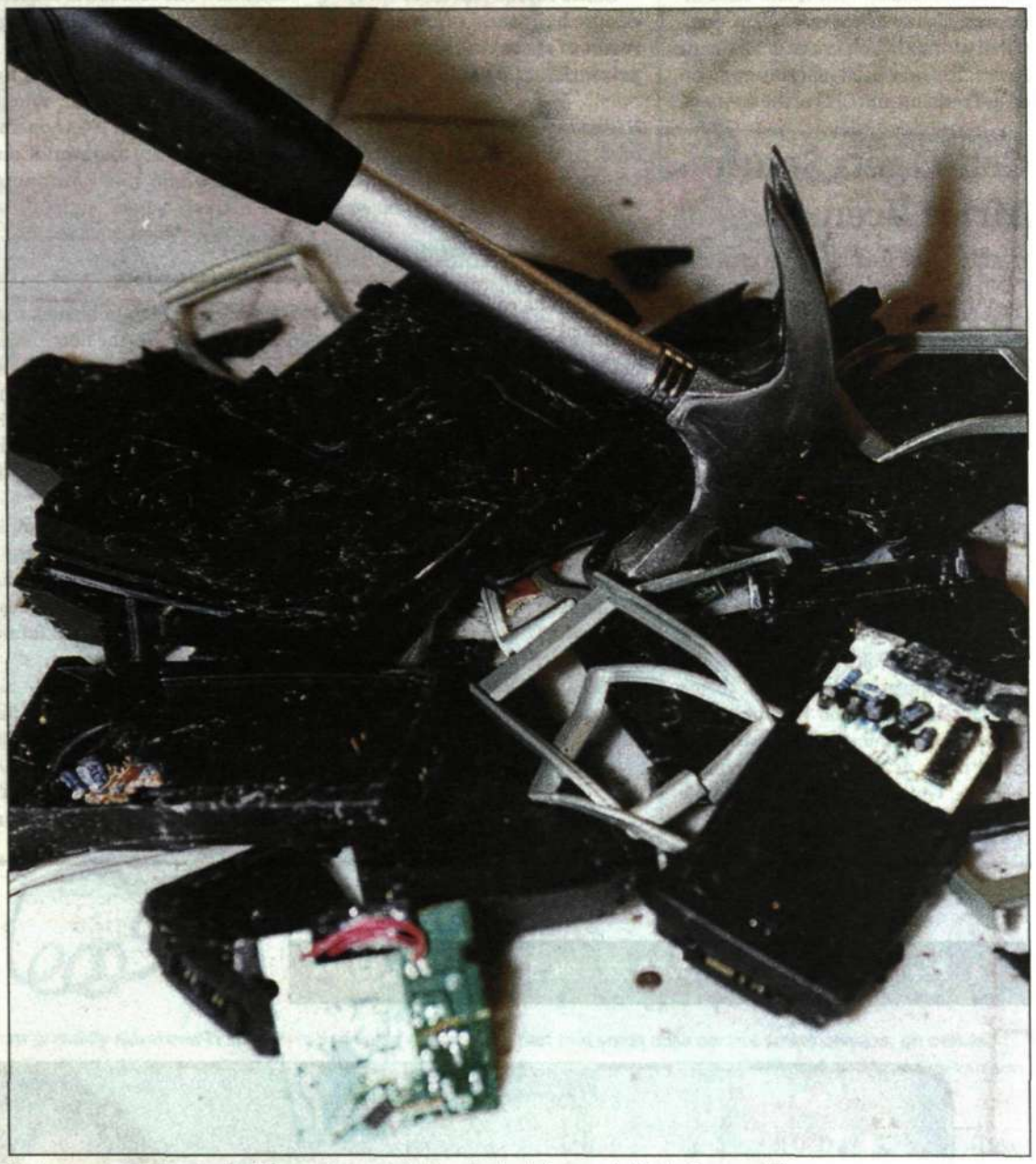
Moreover, there is always the risk that the company's brand image will be adversely affected by such imitations.

Mikael Eriksson is a lawyer and has worked on these kinds of issues for six years. The primary basis for investigation is tips from Ericsson employees and the general public.

"Anyone who discovers something suspicious should contact their nearest product manager at the local company or in the division where they are employed, or contact me directly," he says.

A lot to do

Mikael Westmark says there is a lot that Ericsson can do when it comes to trying to stop production of pirate copies, although he does not believe that the problem can be stopped completely.



Last year, over a hundred raids were conducted against retailers and distributors peddling pirate copies of Ericsson products.

Photo: Ecke Küller

"All of the more simple products we manufacture, such as chargers and mobile phone faceplates, can be copied, which is why I don't feel that we can completely overcome the problem, but we do see that the problem is shrinking as a result of our efforts," says Mikael Westmark.

The only way for consumers to distinguish between pirate copies and genuine products is to shop at authorized retailers.

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First GSM 1900 to Caribbean

Ericsson has opened a new office in the Dominican Republic, in the West Indies – a nation that has over eight million inhabitants living in a 48,000-square-kilometer area.

Ericsson's first customer in the area, the operator Orange, inaugurated the country's first GSM network a GSM 1900 system at the end of last year. Growth has been good and by the middle of February the network, which has one mobile switch and 185 base stations, had over 50,000 subscribers. Orange, or France Telecom Dominica, is one of four mobile operators in the country.

"Our office in the Dominican Republic, with 14 employees, is part of the Caribbean market unit, headquartered in Puerto Rico, which covers the entire region consisting of approximately 27 million inhabitants," says office manager Mats Skoglund.

Raoul Fontanez

The biggest challenge of the project was, according to project manager Maria Blomqvist, to coordinate the expertise from various GSM centers in order to meet the exacting demands placed by the customer. Raoul Fontanez, President of Orange Dominica, emphasizes that it was strategically essential to be able to launch the network before Christmas in order to get a foothold in the market.

"We kept to the timetable thanks to the joint efforts of Orange and Ericsson. Now we have to maintain the initiative, and in order to do so we plan to not only offer voice but also data services such as WAP/GPRS, combined with mobile Internet services," says Raoul Fontanez.

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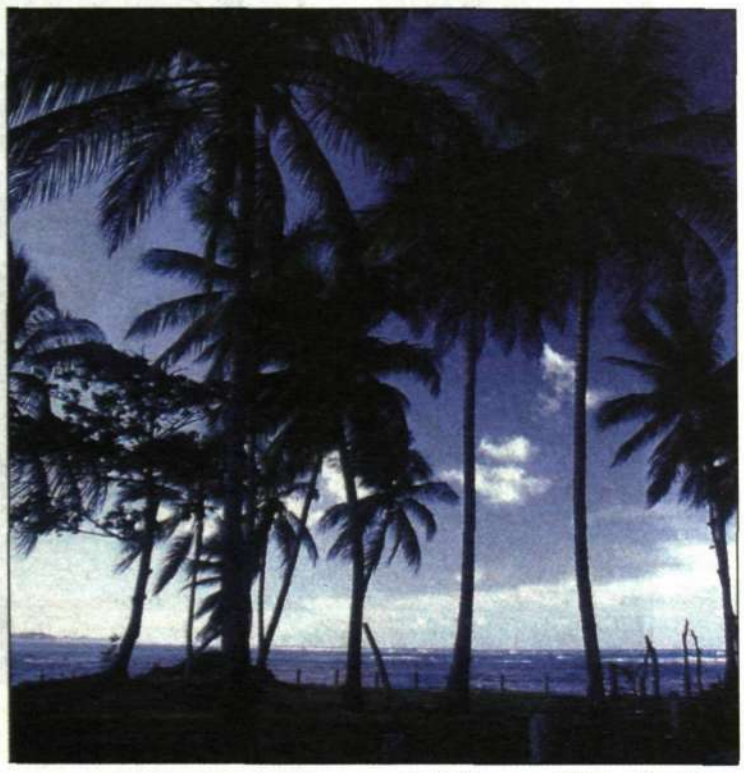

Photo: Pressens Bild/Joakim Kröger

Telia's earnings exceed forecast

»» Swedish Telia posted better results than expected for 2000, with profit of USD 1.1 billion after depreciation, compared with USD 600 million last year. However, the major portion of the profit consists of capital gains, mostly from the sale of the catalog firm Eniro. Sales increased slightly to USD 5.4 billion, compared with 5.2 billion last year. Marianne Nivert, has now been officially appointed as President and CEO of the operator.

Cell-C gets South Africa license

»» After a one-year dispute, Cell-C has finally been awarded South Africa's third GSM license. The process was delayed due to appeals and drawn-out court decisions. A conglomerate led by Saudi Arabia's Oger and America's Verizon are behind Cell-C.

i-mode Palm Pilot coming to Japan

»» Palm has plans to launch an i-mode version of its handheld computer, the Palm Pilot VII. This marks an important step since the Palm Pilot VII has not been as popular as anticipated in the US. This is due to the heterogeneous wireless communications infrastructure found there, as well as the component shortage, which has made it expensive to manufacture.

Hard times for Nortel

Nortel's profit warning issued in mid-February dragged down the entire telecom industry.

Some 10,000 Nortel employees are being laid off as a result of shrinking sales, primarily in the US.

A first-quarter loss this year. A modest 10-15 percent increase in sales, compared with an anticipated 30 percent. Additional problems through the rest of 2001.

It was a dire forecast that Nortel's CEO John Roth presented to the market.

Reacting to the news, shares on the NASDAQ exchange fell an astounding 33 percent. Trade was halted several times on the Toronto exchange, due to massive selling pressure.

Many affected

Nortel's dramatic fall drew a number of related fiber-optics and component manufacturing firms down with it. Competitors such as AT&T, Lucent and Cisco were also hit, as were European telecoms such as Ericsson, Nokia, Siemens and Alcatel.

Nortel's problems are not simply due to the general economic downturn, according to Wojtek Uzdelewicz, a telecom analyst at Bear Stearns in the US.

"It has more to do with a structural problem among Nortel's customers. The solution is consolidation," says Wojtek Uzdelewicz to CNN Financial Network.

"One example is the market for long-distance operators. Where there were once just a few operators – AT&T, Sprint and WorldCom – there are now 15–20 operators. The market cannot support so many," says Wojtek Uzdelewicz.

Growth rate slows

Another structural problem is that competitors within the fiber-optics area have increased from 15–20 to over 60 listed and hundreds of unlisted companies. Consolidation is also necessary here, especially since broadband is not growing as fast as anticipated.

One reason for the sharp fall is that Nortel continued to express unbridled optimism about the future, while other telecom industry players lowered their future expectations.

The result was that many investors bought Nortel shares in the belief that the company was impervious to the general decline.

As recently as one month ago, Nortel claimed that its increase in revenues would be 30 percent in 2001.

In conjunction with the profit warning, Nortel presented an action program to reduce costs. Some 10,000 employees will be let go. Even prior to this news, some 6,000 job opportunities had already disappeared. Nortel has 94,500 employees.

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TELECOM COMPANIES' SHARE PRICE PERFORMANCE

These are the amounts by which the share prices have changed over a year, compared with February 16, 2001.

	52 v	13 v	4 v	1 v
Motorola	-61.4	-17.1	-24.6	-1.5
Ericsson	-54.1	-25.1	-22.8	-4.8
Nokia	-40.1	-38.4	-31.6	-2.6
Siemens	-10.5	9.5	-8.5	0.0
Lucent	-75.9	-40.2	-38.4	-17.5
Nortel	-65.0	-41.3	-49.1	-32.9

Illustration: Björn Hägglund

The Internet learns to talk

Voice control of information services via the telephone has become an important trend in the US. Voice portals already have hundreds of thousands of users.

"These are extremely consumer-oriented products that take advantage of advances in speech recognition," says Mikael Edholm, a business intelligence analyst at Ericsson.

The driving forces behind voice portals are primarily advances in speech recognition, but also the fact that voice calls are becoming cheaper on cellular phones, while information on the web can be adapted to voice portals.
Illustration: Helena Halvarsson

Voice portals are also called vortals or voice webs, meaning that it is possible to access and navigate the web via a telephone, either wireless or fixed.

In practice, users phone a special toll-free number where a synthetic voice guides them through the service offering. The user then navigates in the information structure by using voice commands.

Voice portals have been made possible by advances in speech recognition. The software understands most dialects and is forgiving towards users. There are seldom problems, even if the user speaks with an accent. The only Anglo-Saxon dialect that the software reportedly does not understand is Scottish. This is due to the special pronunciation of the letter "S" used by Scots.

Horoscopes and maps

Voice control is really an extension of keypad-controlled menu systems. It has also been shown, however, that voice control is a more natural and self-evident method for controlling services than keying in commands via touch-tone keys. The possibilities for performing more sophisticated services are also increased. For example, it is fully possible to conduct a search of the World Wide Web via a voice portal on which the search results are presented as synthetic speech.

The most successful voice portal operators are BeVocal and Tell Me, which already have hundreds of thousands of users. The portals normally provide access to a wide variety of information services, including news, weather, horoscopes and stock prices. The most popular services are Yellow Pages, which also contain a localization function for users who want to know where the nearest library or gas station is. Another unique service on voice portals are driving instructions.

"Driving instructions are also available via the web, but they work better via a voice portal, since a mobile phone is easy to use in a car," notes Mikael Edholm.

The first voice portals were launched in 2000. Since then some 20 portals have been opened. By 2005, it is expected that 45 million Americans will use voice portals and that the market will be worth about USD 12 billion, according to an analysis by the Kesley Group published last year.

The industry is already undergoing consolidation. At the same time, new portals are being launched, including one for mothers of small children, for example. Mikael Edholm regards voice portals as a very important trend.

"Voice portals are a typically American phenomenon. The United States is a verbal culture. At the same time, Americans have become used to controlling services via the telephone since the introduction of the answering machine. Americans expect an answer when they make a call, but it doesn't necessarily have to be a human voice. It can just as easily be a machine," says Mikael Edholm.

Humans over machines

"The telephone culture in other parts of the world, on the other hand, is not as accommodating for voice portals," continues Mikael Edholm. "Southern Europeans, for example, want to hear a human voice, not a machine, answering the phone."

One of the biggest advantages of voice portals is that the services are not constrained by the underlying network architecture. Portals work regardless of whether the TDMA, CDMA or GSM standard is used.

"This is particularly important in the US where there are so many different types of cellular networks. With voice portals, information services are elevated to a level at which they are independent of the system used," notes Mikael Edholm.

Perhaps the most important advantage, however, is that the telephone is available wherever the user is located. Anyone with a mobile phone or a phone card can access a voice portal. In addition, more people will have a phone than a computer for the foreseeable future.

Several of the traditional web portals and Internet service providers have started voice portals that enable them to offer their content in a new manner. Both Lycos and Yahoo have launched voice-controlled services, and America Online has started a trial of AOL by Phone, which is included in the ISP's AOL Anywhere concept through which content is adapted to different access devices, such as the TV or wireless handheld computers. For the time being, AOL's voice portal is free of charge, but as of April, there will be a fixed monthly charge of USD 4.5. Subscription fees are of course feasible for an Internet service provider with tens of millions of subscribers. Newly started and strictly consumer-oriented voice portals, however, must offer services free of charge to attract users. Revenues are instead derived from advertising, which is presented just before the information is conveyed. Other revenue sources include sharing traffic revenues with operators.

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Different standards for voice portals

Few European companies are working on development of products for voice-controlled information services. Ericsson has developed a few applications for voice control, including a mobile telephone that can be controlled by voice commands. Another product is Voice Activated Assistance, which is primarily linked to Ericsson's MD110 PBX.

Philips and the Belgian company Lernout & Hauspie are the two European companies that have been most successful with voice products. Both have focused primarily on products for the computer industry, however, and not so much on telecommunications.

Pipebeach is a newly started Swedish company that is based on a platform for voice-controlled mobile services called Speechweb. This, like many other applications in voice control, is based on the open standard VoiceXML.

VoiceXML is a subset of XML (Extensible Markup Language), the meta-language that in the future will take over HTML's role as a page-description language for web pages.

The standard was developed by an industry association called VoiceXML Forum in which Ericsson is a supporting member.

In May 2000, the VoiceXML 1.0 specification was submitted to W3C, the WorldWide Web Consortium, which means that VoiceXML is on its way to becoming an open standard.

This also means that companies working on the development of web or WAP services will be able to develop services for VoiceXML relatively easily.

"The idea with the VoiceXML standard is that it should be possible to access web-based information from all telephones via a voice portal," says Christer Granberg, President of Pipebeach.

Mats Lundström

www.voicexml.org

www.w3c.org

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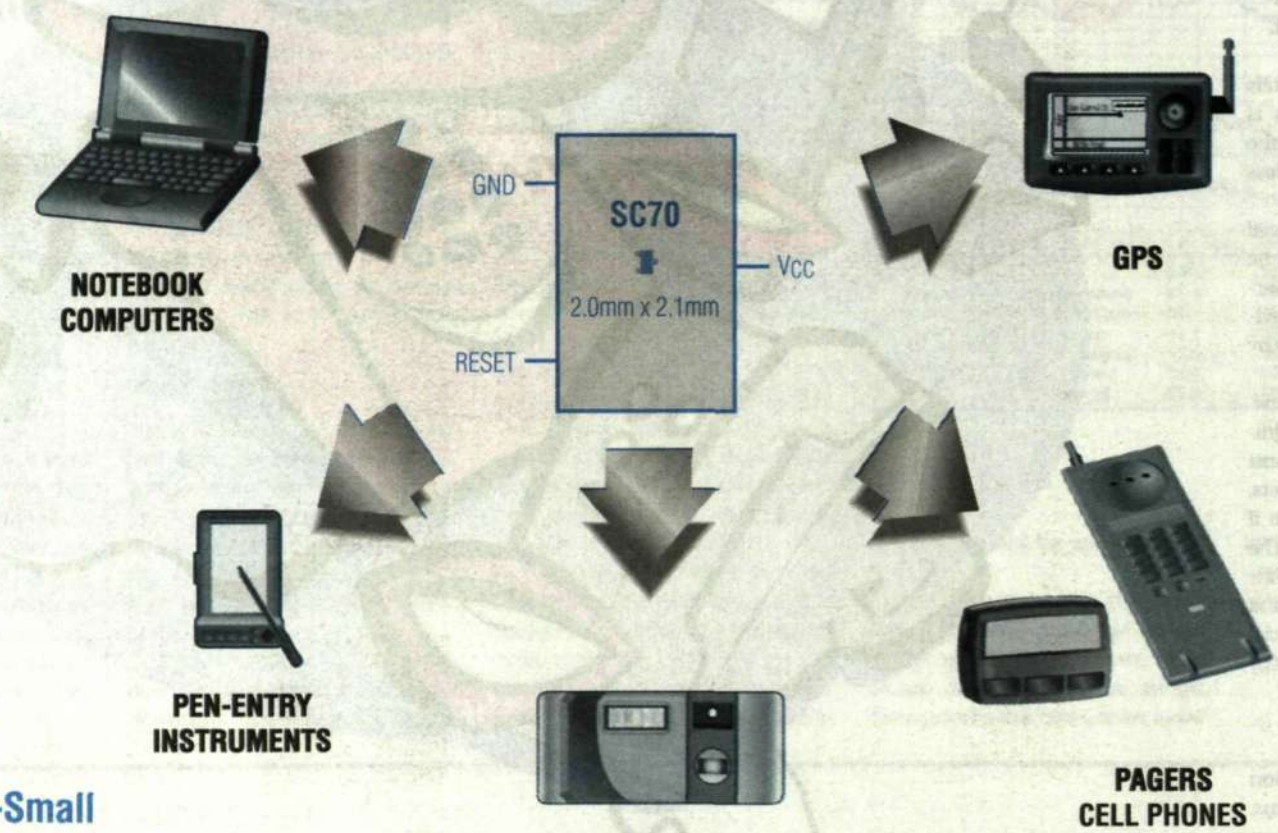

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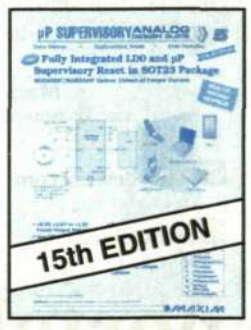

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Handheld device transports audience onto the ice

A test was recenty conducted at a hockey game in Luleå, Sweden, during which spectators could follow the match in an entirely new way. Moving images, game statistics and information about players' fitness status were made available through small handheld devices that are part of the Arena system. Already, there is demand for the system far beyond Sweden's borders.

"It's really fun to be able to sit in the stands and watch replays or game statistics on the handheld unit," says Luleå fan Ulrica Marklund, who was one of ten people recently chosen to test the Arena system during a match. Photo: Stig Eidegren

➤ The test took place during a premier division professional hockey game between two Swedish teams. Ulrica Marklund, a dedicated Luleå fan, is usually part of the team's cheering section. On this evening, she is one of ten people selected to test the Arena system. Each tester is equipped with a handheld device connected to a wireless LAN network set up within the hockey arena.

Out on the ice, the match gets underway. Some of the hockey players have been equipped with sensors that can read their pulse. Video cameras are mounted in the stands and the referee even has a camera mounted on his helmet.

Just 25 seconds into the match, the crowd cheers. Forward Mikael Renberg, recently returned after playing for the Philadelphia Flyers, pulls away and scores the first goal of the match.

Ulrica clicks on her screen to see a replay of the goal. Switching to a new display, she is able to see how taking the lead has driven up the pulse rates of his fellow teammates. She can also choose to watch the game through the referee's camera.

"I think this has potential. What I like best about it is the ability to see replays of goals, penalty situations and so forth, and I also like to check shooting statistics, which are updated throughout the entire match. The biggest problem is that being unfamiliar with the system, it's easy to spend too much time looking at the screen, perhaps missing something important down on the ice," says Ulrica Marklund.

The system that makes all of this possible has been dubbed the Arena project and was developed at the Mäkitalo Research Center in Luleå, with Ericsson Erisoft as one of the joint-venture partners. The project began in autumn 1999, with the first test occurring just over a year ago, when a match was transmitted via Luleå's broadband network. This game, however, marked the first time that data and images were transmitted wirelessly to handheld devices in the stands.

"I think that this will be good for hockey and could increase public interest if it helps people get closer to the players. Eventually, data regarding pulse and breathing rates will also help me to set up training programs and tactics," says Lars Modig, Luleå's coach.

Results of this test will now be evaluated in order to determine any weak points. Issues such as image quality and how to solve data capacity when several hundred devices are being used in the arena, will be addressed. But even at this stage, the project has already attracted a great deal of attention.

"Even though we haven't resolved everything yet, we still learned a great deal through this test. We're already in discussions with the Swedish Amateur Athletic Association and the Swedish Orienteering Association and have plans to use the system at a festival in northern Sweden this summer. A great deal of interest has also been shown by the Australian soccer association and we know that the NHL is following our project closely. Even they don't have anything like this," says project manager Tommy Arngren at Ericsson Erisoft.

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FACTS/**ARENA PROJECT**

- The Mäkitalo Research Center (MRC) was created at beginning of 2000.
- The center is named after Östen Mäkitalo, the father of modern mobile telephony.
- MRC is a joint venture between Ericsson, Telia, Frontec, Teracom and the Luleå University of Technology.
- Operations are focused on research pertaining to the mobile Internet.

Players connected by Bluetooth

➤ The test conducted in Sweden was merely a humble demonstration of some of the potential that the Arena project hopes to achieve. Serious development work will now get underway. During the match, just a few of the features that have been developed were tested, due to practical limitations in order to make the test manageable. With the assistance of the Luleå University of Technology and the Optovent company, among others, a number of sensors have been developed, including pulse measuring devices used during the game. Others are acceleration sensors attached to the legs of players, breathing sensors that can detect how winded a player is, and a "tackling" sensor.

"I find that sensor to be the most fun, myself, and I've lobbied hard for it. With the tackling sensor, the audience can get an idea of how hard a player is tackled," says Jerker Delsing, a professor at the Luleå University of Technology.

With a camera mounted in referee Ulf Rådbjer's helmet, spectators are able to follow the game even more closely.

Special helmets with built-in cameras have also been developed. They allow the audience to view an offensive situation from the vantage point of the goalie, for example. For now, however, the helmet is still too heavy to be used by players. In reality, the technology is limited only by one's imagination.

"One could, for example, list players on the display screen according to how tired they are. Players who are experiencing rapid pulse or breathing rates could be highlighted in blue, for example," says Jerker Delsing.

The sensors have been built into protective gear that was specially designed by a manufacturer, and do not require any wires on the body. Instead, signals are transmitted using Bluetooth technology to a radio transmitter that relays the data to a server. From there, the system communicates with the handheld devices by way of a wireless LAN network installed by Telia.

"The important thing is to develop technologies that people want. Instead of waiting until every last detail of the system has been worked out, we conduct tests over the course of the project and evaluate what the public really wants. That gives us the best and most rapid results," says Mats Ericsson, head of the Mäkitalo Research Center.

Lars-Magnus Kihlström

At Ericsson's Telefonplan headquarters in Stockholm, the Ericsson logo lights up the sky day and night. Photo: Lars Åström

The creation of a corporate image

Today, the Ericsson logo is widespread and well known around the globe and most people don't give any thought as to why it looks the way it does. The story behind the logotype had almost been forgotten but is recalled here, thanks to a series of coincidences and outright detective work.

➤ The corporate logo was implemented almost 20 years ago, on January 1, 1982. It marked the first time that all of Ericsson's subsidiaries were united under a single trademark.

The logo that it replaced was outdated, sporting a look from the 1940s that included that era's typically curvy lettering.

Over the years, a host of new logos emerged among the company's subsidiaries. In time, however, the situation proved unworkable, especially for a global corporation like Ericsson.

In conjunction with the creation of a new logo, it was decided that the initials LM (for Lars Magnus) should disappear. LM was a Swedish holdover that was not used at all in many other locations. In some countries, it was believed that the LM stood for Limited.

Gustaf O. Douglas, advertising manager at the time, requested 36 months to develop and implement a new logo. He was given 16.

"The logo had to have an international look, without a Swedish leaning. Furthermore, there was not a great deal of time, so I decided to give the assignment to a company that I was familiar with, AID in London," says Douglas.

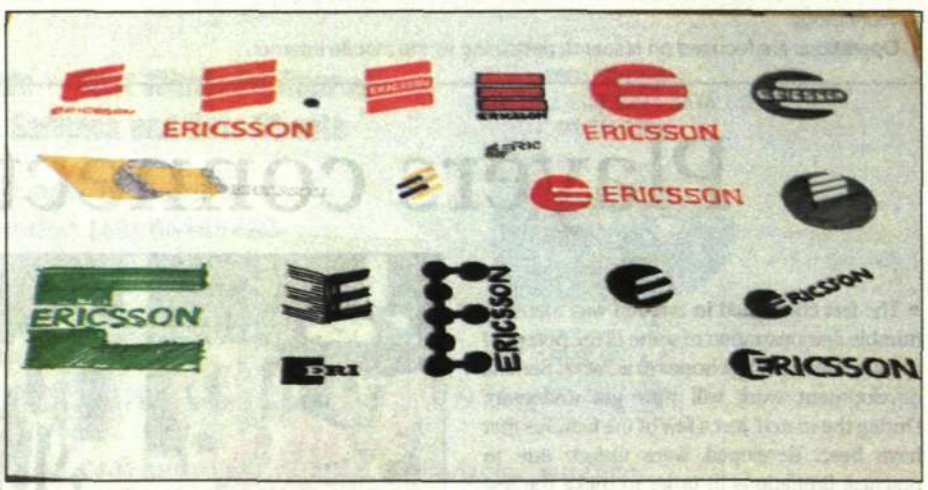
AID quickly came up with four proposals for a new logo. The eight members on the senior management team were then given the opportunity to choose and all but one voted for the same alternative.

The President at the time, Björn Svedberg, got to have the final word.

"I was so nervous. Had he made a different selection, it would have posed a problem, so I breathed a sigh of relief when he chose the same as the rest of the management team," recalls Gustaf O. Douglas.

Color proved to be a bigger problem, however. AID suggested red, a strong, powerful color. But Björn Svedberg was hesitant.

"The trendsetters wanted to use a striking red color, but I didn't think that felt right, so I asked them to go out into the hallway and ask ten people. The result was blue, and I think that was a good decision," says Björn Svedberg.



Numerous proposals were made. Various shapes and designs were worked and reworked. It is, perhaps, fortunate that these proposals were rejected.

Then there's the question about the symbolic E, which in sweden quickly became a joke – "the three sausages".

"We felt that we needed a symbol to go along with the name, but the fact that it resembled meat products was not something that we had foreseen. Nevertheless, humorous comparisons were immediately drawn in Sweden. In the long run, I think it was a good choice. Today, hardly anyone talks about the three sausages," says Gustaf O. Douglas.

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Mystery solved in cellar

Original sketches of Ericsson's logo have now been located and saved for posterity. The winding path to their discovery led from a now defunct company, via an unidentified man in a photo, to a basement store room in London.

The original sketches for Ericsson's current logo were discovered in a London basement. Gustaf O. Douglas, former advertising manager, and Johan Fischerström, former head of Corporate Visual Language, reminisce about Ericsson's efforts to renew its image 20 years ago. Photo: Lars Åström

➤ The year was 1989. Johan Fischerström had just assumed the job of overseeing Ericsson's logo. He was developing a new manual containing guidelines for the proper use of the logo and wanted to locate the original drawings to ensure that everything was done correctly.

"I received the name of the AID design firm, which had created the logo, from Gustaf O. Douglas who, by that time, was no longer advertising manager. As it turned out, the company had disbanded and it was as if it had simply disappeared, so I had to give up," says Johan Fischerström, who is now retired himself.

Three years later, Johan Fischerström happened to show a clipping from a ten-year old issue of Contact to some visitors from the Samson Tyrell design firm. The clipping included a photo of a man working on the logo, identified as Austrian designer Werner Strauli.

"At that point, one of the visitors said, 'That's not Strauli, that guy's name is Terry Moore. We acquired AID and he's now working for us,' to which I replied that they must still have the originals, and he promised to check their basement storeroom.

A month later he called back and said that he had indeed found numerous sketches from the preliminary work on the logo," says Johan Fischerström.

The find proved to be a gold mine and included hundreds of logo variations, some conservative, others more daring. Also included among the documents was the original drawing of the winning submission, together with images of how it could be used on cars and buildings, and in advertisements.

"For me, as a trained graphic designer, it was a fascinating collection of materials. I was able to see what Terry Moore was thinking and what design concepts he was using. I was euphoric," recalls Johan Fischerström.

The sketches will now be donated to Stockholm's Society for Historical Business Archives, where they will be available for future research.

Lars-Magnus Kihlström

Still, after 20 years, the Ericsson logo is one of the things designer Terry Moore is most proud of having created.
Photo: David Banks

"I'm most pleased with the two s's"

Terry Moore was only 28 years old when he created Ericsson's logo in 1981. It remains the job that he is perhaps most proud of.

"I get a kick every time I see the logo, and that's fairly often," he says.

➤ Terry Moore is a strong advocate of corporate identity, the image a company conveys through its trademark and actions. He has worked in the design industry for almost 25 years and is currently employed by Enterprise/IG, an international consulting firm located near Covent Garden in London.

He is the man who designed Ericsson's current logo 20 years ago.

"There aren't that many things that I created, which are still being used, but I still see the Ericsson logo everywhere – and with a certain amount of pride. I sometimes tell colleagues that I created it and their reaction is always the same, 'Really? Is that true?'"

Straightforward and elegant

The assignment was to create a logo that would serve Ericsson into the next century, a task which he obviously succeeded at.

"As I see it, the design has a timeless quality about it. You can't point to it and say this is a product of the 1980s," says Terry Moore.

The Ericsson logo is based on the Frutiger font, which was originally created for signage in airports. Advantages include a legible font that is also elegant and not too square or impersonal, like other, similar fonts," says Moore.

The most distinctive aspects of the font are the letters r and s, and it is these s's with which he is most pleased.

"It's the particular way that they stand next to each other in the Ericsson name. They bestow the word image with a clean, crisp, quality that provides the final lift," says Terry Moore, in a way that would make it seem completely natural for ordinary individuals to stand around admiring letter combinations. But he is, after all, a designer.

Highly legible

The primary requirement placed on the new logo was that it be clear and easy to read.

As proof of its legibility, Terry Moore tells of a computer motor rally game his children play.

"One of the cars has an Ericsson ad on the side, and despite the poor resolution and the fact that the display is divided into shimmering squares on the screen, one can still make out what the letters say. I think that's a good test," says Terry Moore.

Lars-Magnus Kihlström

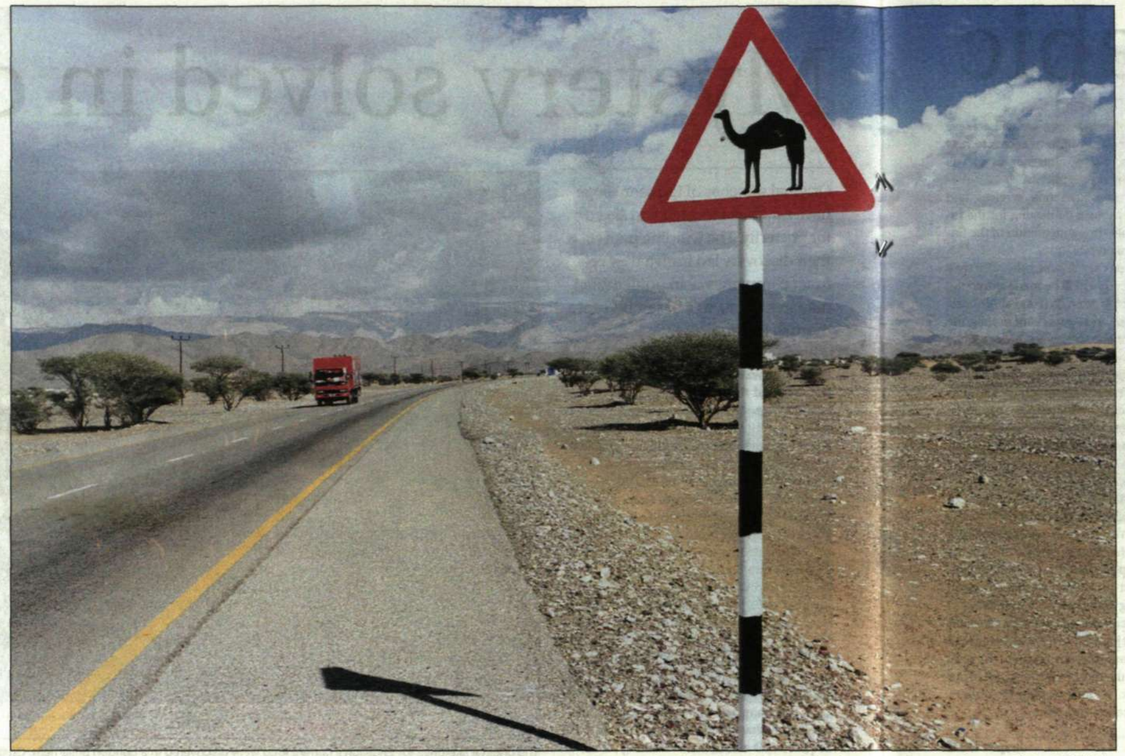


Photo: Ecke Küller

Oman is barren and difficult to access. That means it is difficult to expand the telephone network. Consequently, it is predicted that mobile telephony will undergo more rapid development than fixed telephony.

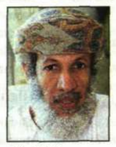
No telephones, three schools and seven kilometers of asphalt road. That's all that existed when Ericsson arrived in Oman in 1973.

Since then, Oman has undergone a transformation. Deregulation of the telecom industry has resulted in an expansion of networks and services. Increased access to the Internet has opened the door to the outside world. Ericsson is very much a part of this transformation.

Oman opens its door to the world

➤ Oman recently signed an agreement with the World Trade Organization (WTO) involving deregulation in a number of areas. The state-owned telephone operator, Omantel, is no exception. A couple of years ago, Omantel was converted from a government agency into a business-oriented company. Privatization is underway, but it remains the country's sole operator.

As head of Omantel, Abdullah Al-Rawahy is in a position to shed light on what is going on within the company and the telecommunications market in Oman. He started working as an engineer at Omantel at the beginning of the 1970s. He maintains that, while technical expertise is important, especially considering the rapid pace of technological developments, it is business acumen that the company most needs to develop.



Abdullah Al-Rawahy

"Currently, it is a challenge for me to immerse myself in market issues. In 2000, the company was organized into business units and support units. That means that we're able to see what is working well and what is performing poorly," says Abdullah Al-Rawahy.

Omantel generates a significant demand for knowledgeable employees. Talented individuals are recruited from the university, while existing employees are offered training.

"In 2000, the company sent 40 people to the university so that they could obtain their business administration degrees. In the past, we focused solely on technology. Now we're shifting towards a customer-oriented focus. Customers are becoming increasingly knowledgeable, and tomorrow's customers will also have the option of selecting from more than one operator," says Abdullah Al-Rawahy.

To date, the government still owns all of the company's shares, but a sale of 34 percent to an appropriate strategic partner is in the works. Ten percent of shares will be sold on the open market, with the government retaining control of the remaining 56 percent.

The market is gradually being opened up to competition. Initially, suppliers of fixed and mobile Internet services will have a chance to establish themselves. Room will soon be made for a second operator in the mobile phone market. Fixed telephony will be the last area to be exposed to competition.

Telephone use in Oman is still not widespread. Out of a population of 2.5 million, only about twelve percent of the inhabitants have a fixed telephone subscription. Approximately eight percent of the country's population owns a mobile phone.

"Oman is large, difficult to access and sparsely populated. Consequently, the number of fixed subscribers is low. In some areas of the country, we are using boats and helicopters to expand the network, and that is costly. Our GSM network went online in 1996 and already we have 170,000 subscribers."

Abdullah Al-Rawahy believes that the mobile phone market will be the most expansive area within the next few years.

"Trends show that this is the area where growth will occur. While fixed telephony remains less expensive, the flexibility that mobile telephony offers is appealing to customers. The number of mobile phone subscriptions has increased by 20,000 every year. Prepaid subscriptions will be launched during the first part of this year, which could double the subscription rate. Services such as SMS and WAP will make mobile technology even more attractive," says Al-Rawahy.

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FACTS/ERICSSON IN OMAN

- Ericsson in Oman has 45 employees.
- Hans Karlsson oversees the local office.
- Ericsson began to build the first analog telephone network in Oman in 1973. Siemens received the first contract for a digital network at the beginning of the 1980s, but a few years later, Ericsson also received a contract to construct digital networks.
- Ericsson began construction of an NMT network in 1984. The current GSM network was started in 1996.
- Ericsson oversees mobile networks in the coastal region around the capital, Muscat. This is the country's wealthiest area with the highest telephone penetration rates. Home to 600,000 of the country's 2.5 million inhabitants, 60 percent of the country's mobile phone traffic occurs here. In the northern sections of Oman, Motorola dominates, while, in the south, Siemens is strongest.
- Ericsson's market share of the fixed network totals 25 percent. Market share of mobile phone sales is around ten percent.
- Currently, Ericsson in Oman is working on the expansion and cell planning for the existing GSM network, development of WAP, planning a GPRS network and the expansion of Engine.

- Ericsson expects to see strong growth within the telecom sector in Oman during the next few years. Currently, there are 170,000 mobile subscribers, 25,000 Internet subscribers and 270,000 people with fixed telephone lines. By 2003, it is estimated that there will be 650,000 mobile subscribers, 190,000 Internet users and 400,000 fixed telephony subscribers.

Oman, like most of the Gulf states, requires international companies to have a sponsor who serves as a local representative for the company. Khalid M. Al-Zubair, a well-known businessman in Oman, serves as Ericsson's representative within the country. He vouches for the company's quality for the country's decision-makers and also assists the company in bridging cultural differences.

He is a link between cultures

➤ The Zubair Corporation is a business empire that was established in 1967. The company is involved in both production and retail in a number of areas. In addition to telecom, its biggest business ventures include furniture manufacturing, the gas and oil industry and auto retailing. Zubair also serves as one of Ericsson's two retailers in Oman.

Khalid M. Al-Zubair's father founded the company in 1967. His father served as the sponsor for Ericsson from the time it became established in Oman in 1973, until his son took over, approximately one and a half years ago. Everything that exists in Oman was built up after 1970.

"Prior to that, the country was completely different. There were no roads, no schools and no communications. We call the period of time after 1970 our renaissance. The founder of the company was determined that we should begin our business operations within telecom, and Oman really needed those contracts," says Khalid M. Al-Zubair.

He believes that collaboration with Ericsson functions well and that strong ties have been established between the two companies after all these years.

"Together, we can achieve things that we would otherwise not be able to achieve alone. We have local expertise and know the decision makers and their requirements."

Khalid M. Al-Zubair does not believe that politics and business are intertwined in Oman.

"No, neither one is dependent on the other. While it can help to know decision-makers, the most important thing is actually quality. It's not a question of influence, but rather one of credibility. We've always been here in the country and people know what we stand for."

He looks forward to the opportunities that will result from deregulation.

"It will be exciting to have a second operator. Improvements are being made at Omantel thanks to deregulation."

Jesper Mott

Together, we can achieve things that we would otherwise not be able to achieve alone.

Khalid M. Al-Zubair

A scent with long history

➤ Ships have been arriving at Oman's harbors loaded with fabrics, spices and other goods from the Far East for hundreds of years. When Oman embraced Islam in the 7th century, Muscat became one of the most important places for oceangoing trade in the entire Muslim world. Today, there are heavenly scents reminiscent of that age of greatness.

During their travels, sailors from Oman spread both their religion and their culture as far away as China. The Omani trading empire reached its peak following a 150-year period of Portuguese occupation during the 16th and 17th centuries. In 1744, the Al bu Said family seized power and Sultan Qaboos Bin Said Al Said, who currently rules Oman, is descended from that family.

During the 19th century, Oman controlled land areas on both sides of the Persian Gulf and along the coast of Africa. Zanzibar was, for a period of time, the capital of the empire.

Following World War I, Oman grew increasingly isolated from the outside world and the country lost its importance in the region.

During the 1970s, Sultan Qaboos opened the door to the outside world and to new economic thinking. Today, Oman is associated not only with oil and gas, but also perfume. Amouage is the world's most exclusive perfume and has become a symbol of the country. Raiya Al Shidhany stands in one of the few perfume stores in the world where the scent is sold, and she gladly explains the story of how it came about.

Raiya Al Shidhany sells the exclusive perfume Amouage, which has become a symbol for Oman.

"A well-known family here in Oman came up with the idea of creating a perfume that would be reminiscent of the famous, old perfumes of the past."

The family enlisted French perfume maker, Guy Robert, giving him the task of creating a scent using ingredients from around the world. Amouage means wave in Arabic, although Guy Robert himself called the perfume his symphony. Raiya Al Shidhany explains that it was received like a piece of jewelry when it was introduced.

"The bottles themselves are expensive. They are made out of crystal, gold and silver."

Amouage is only sold in a few select stores around the world. Over the years, the company has expanded its product offerings, but continues to sells the original scent.

"This is the pride of Oman," she says.

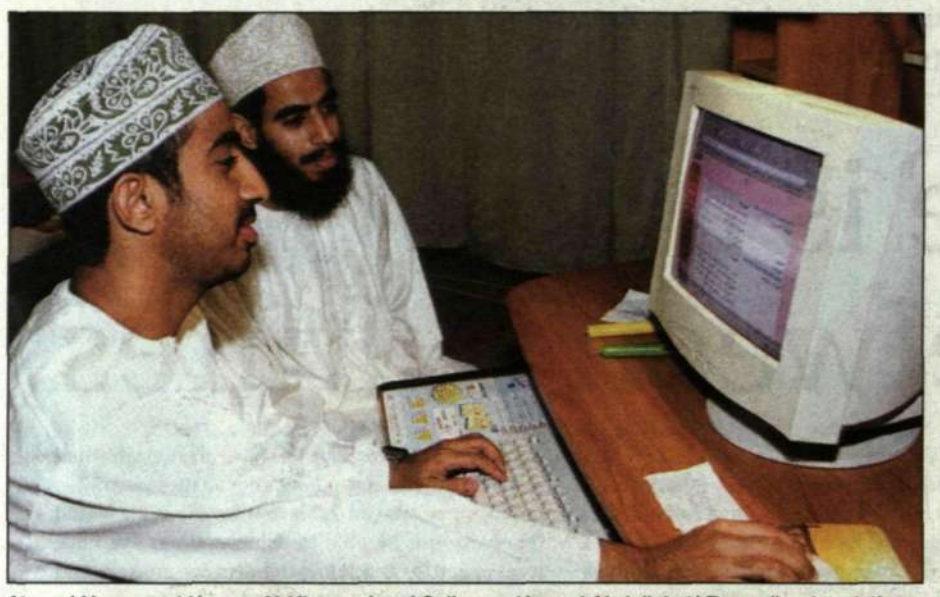
Jesper Mott

FACTS/OMAN

Form of government: Monarchy.
Population: 2.5 million (60 percent under the age of 20).
Natural resources: Oil, natural gas, copper, chromium, fish.
Religion: Islam.
GNP per capita: USD 6,500.
Telephone operator: Omantel.

Surfing the Web in Arabic

Ahmed Hammond Nasser Al-Kharoosi, age 26, and his friend Sulieman Hamed Abdullah Al Ramadhani, also 26, are interested in the Internet and telecom. At a technology fair in Oman's capital city, Muscat, they give a picyure of how young people in Oman regard IT developments. They are in favor of the openness that it brings, but would like to see more Internet sites in Arabic.



Ahmed Hammond Nasser Al-Kharoosi and Sulieman Hamed Abdullah Al Ramadhani took the opportunity to surf the Web when they visited Omantel's display at a telecom exhibition in Muscat. Photo: Ecke Küller

➤ New Year 2001 in Oman was celebrated with a major festival to honor the 30th anniversary of Sultan Qaboos Bin Said Al Said as the country's leader. Celebrations in Muscat lasted a full month and included food, singing, dancing, and numerous exhibitions. One of these exhibitions was an information tent set up in the middle of the city by Ericsson and telephone operator Omantel.

Omantel offered visitors the opportunity to sit down for a while and surf the Internet.

Ahmed Hammond Nasser Al-Kharoosi and Sulieman Hamed Abdullah Al Ramadhani sit next to each other in front of a computer screen. Both have Internet connections at home and spend between two and five hours per week on the Internet. They primarily visit various discussion groups, but they are also learning English via the Internet.

"Using the Internet is my absolute favorite pastime at the moment. It provides us with information both from Oman and the rest of the world," says Sulieman.

While surfing the Web, they visit an Arabic-language discussion group. Information in Arabic is otherwise a rarity on the Internet.

"There are too few websites in Arabic. If you follow links from Arabic pages, they frequently lead to English-language pages. That's why we have to learn better English," says Ahmed.

Ahmed and Sulieman are not exactly representative of the rest of the country's inhabitants. So far, only 25,000 people in the country have fixed Internet connections, although that figure is expected to grow significantly during the coming years.

"Omantel is starting to improve its service, and Internet access is becoming less expensive," says Ahmed.

Moshin bin Hassan Al-Raisi is head of Omantel's unit for fixed networks. He explains that the company is working hard to reach out to customers and offer faster service.

"We're becoming increasingly customer oriented, and getting better at marketing. Now, with the help of technology, we will achieve our goals. Customers will have access to new multiservice technology. Internet users will notice significant improvements."

He believes that Ericsson's services and products are extremely interesting for the future. For example, implementation of the Engine solution is a possibility.

"We have to look at this now, otherwise we'll fall behind. A decision will be made within the near future," says Moshin bin Hassan Al-Raisi.

Both Sulieman and Ahmed are among the minority of inhabitants who own mobile phones in the country.

"I've had a mobile phone for three or four years. It has made my life much easier and I save a lot of time," says Ahmed.

3G is still a vague concept for people in Oman, but Sulieman and Ahmed are familiar with WAP.

"It will be fun to test WAP once the services are in place," says Ahmed.

Ghulam Ibrahim Al-Balushi is head of Omantel's mobile communications unit. He explains that WAP services will be available during either the first or second quarter of 2001, and he expects that this will generate increased interest in mobile phones. Ericsson will be assisting Omantel in its marketing of WAP services, and the companies are planning to conduct joint GPRS tests later this year.

"Ericsson is an excellent partner. They are responsible for the most important part of our mobile network. We look forward to continuing our collaboration with them."

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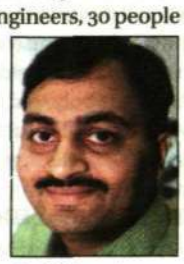
E-learning ties company together

The local office in Oman is located far from the core of Ericsson's organization. For employees in Oman, e-learning has provided a new way of accessing training and information, and they have heartily embraced the opportunity to learn via the Internet.

➤ Ericsson in Oman is proof of the fact that e-learning can be of great advantage for a company of Ericsson's size. Of the 45 employees, 95 percent of them have completed Competence Shift and 70 percent have received their IT certificate, which is akin to a driver's license for computer users. These two courses must be completed in order to proceed with Knowledge Step, which has a technical focus.

Knowledge Step is a broad training program. Two of the many courses that make up the program are also offered in the form of e-learning. One is a basic course on IP and the other is a course covering the configuration of computer networks.

Anil Kharche is a coach for Knowledge Step in Oman. He explains that, although the courses are only mandatory for engineers, 30 people in the office have signed up and several of them are not engineers.



Anil Kharche

"A total of 25 people have received their certificates. Five are still working on the course," says Anil Kharche, with pride.

When Hans Karlsson, head of Ericsson in Oman, gave him the assignment to oversee the courses, he did not even know what the work involved.

"I got in touch with those responsible for Knowledge Step via the Internet. I had to train myself in how to oversee this work, taking an e-learning coaching course. We started in September when I presented the program to the employees. We installed the course on the LAN, so that they can access it and study whenever they want," says Kharche.

It is up to each individual to plan their course of study. Of course, it's always possible to accept assistance from someone else to log on and complete the test, but it is rather meaningless to do so.

"People who do that are only cheating themselves. They don't learn anything from it."

Anil Kharche sees both advantages and disadvantages in e-learning. Employees are able to regulate the amount of time they spend on the course themselves. It is an inexpensive way to conduct training. Disadvantages include the fact that it is difficult to ask questions or have discussions, and that a mechanical learning process can be adopted in order to answer the questions.

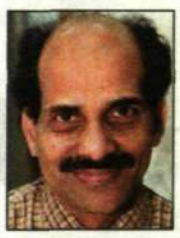
Employees are constantly turning to Anil Kharche with questions. As head of technical support, he is used to always being available, so that is no problem.

He believes that e-learning will play a significant role in the future, and he is proud of what his colleagues have accomplished.

"We haven't made comparisons with other local offices, but Hans Karlsson has heard that we have experienced very good results. That is gratifying."

Jesper Mott

FACTS/LESSONS FROM E-LEARNING



TK Unny,
Executive Secretary
"I'm not an engineer, but I have completed both sections of Knowledge Step e-learning. It took a good deal of effort and I had to make a few attempts. My IT skills have improved. While I don't understand everything, I understand much more now. If you really put the effort into it, you can acquire a large amount of knowledge through e-learning."

Bart Gaya,
Total Project Manager
"We've only been able to complete two portions of the entire Knowledge Step. In the future, more parts might be made available through e-learning. It was rewarding to do it and I believe that it should continue to be developed. At the same time, it is impossible to completely replace human contacts."

Fatimi S. Aadil Osman,
System Support Engineer
"It has provided me with considerable benefits. People who are not engineers have been able to participate in the Knowledge Step courses here in Oman. Now they have an idea of what we engineers are talking about. Management has had to put a little pressure on employees to get them to take the courses, but it has been a positive form of pressure. I think that it is a good way to disseminate information and skills to many people."

Muhammad Nadir Khan,
BSC Engineer
"It was good to be able to go in and work on the courses when you felt like it. You're able to go back to the portions that you don't understand. For me, as an engineer, the market awareness portion of Competence Shift was actually the most difficult. It's good that Knowledge Step is led by a coach with whom you can pose questions and discuss things with."

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Building smarter networks

Core Net, the core network consisting of controls and transport networks, is instrumental to the development of 3G. The new core network forms the basis for the mobile Internet, enabling operators of wireless and fixed networks to easily and incrementally upgrade from today's systems to 3G.

Working at the Core Networks product unit, where the core network and control and transport networks are being developed, Rutger Reman and Magnus Blomqvist find themselves at the heart of mobile Internet development. Photo: Eduardo Valenzuela

➤ The new core network creates a flexible and future-proof system, able to handle all kinds of traffic, from circuit-switched voice to packet-switched data and IP services. Operators can easily switch from today's STM transport technology to ATM and eventually IP.

The Core Networks product unit within the Mobile Systems division was created last April. The reason for doing so was to strengthen the evolution and work on GPRS and WCDMA and to better reflect the system architecture. Under the new organization, the product unit has taken on total system responsibility for 3G, including everything from systems to terminals. Roland Fors is the head of the product unit.

In the past, the telecom world has operated using a vertical architecture with very few synergies between fixed and wireless networks.

"That model will now be replaced with a horizontal structure consisting of three layers, where the core network – including switches and routers for transport and control of circuit-switched and packet-switched traffic – is shared by all networks," says Magnus Blomqvist, head of product management at Core Networks. He draws three horizontal ovals to symbolize applications, the control network and the transport network. Using media gateways, the core network is connected to various kinds of access networks such as mobile telephony, fixed telephony or the Internet.

Pointing at the bottom two ovals he says, "This is where Core Networks operates, and it involves control networks with nodes such as the Mobile Switching Center (MSC) and GSN, the node for GPRS, and transport networks with various kinds of routers. You could say that we're building the foundation for the mobile Internet."

New expertise

The Core Networks product unit is developing a generic, horizontal core network with an open interface for service networks and applications. It involves a great deal of new expertise, combining fixed telephony, wireless telephony and IP skills.

Many others outside the product unit, with its 2,500 employees, are also involved in developing the core network. Including the product unit's employees, the total number of people involved is around 4,000, and that figure will increase to around 5,000 by the end of this year. Aachen, Germany is another important development center in addition to sites in Kista, Älvsjö and Gothenburg, all in Sweden. Other key locations include Finland, Hungary, Italy, Ireland and the US.

An important task in Kista right now is the total verification of a 3G system for Japan. When it is time for total verification of UMTS, or 3G for Europe, this will occur in Aachen.

Close collaboration

"We have to help the marketing company so that it will be easy for them to sell the core network as part of the transition to 3G. Something we have learned from GPRS is that Ericsson has to get better at thinking in terms of 'end-to-end', in other words, always having the end user in focus," says Rutger Reman, head of product marketing. He emphasizes the importance of close collaboration among the radio network, the core network, applications and terminals.

Petra Lundmark, who oversees the product unit's marketing communications, explains that since 1999, GPRS equipment has been delivered to more than 50 operators and that valuable experience has been gained that can be used during the introduction of 3G. During the coming year, there are plans to deliver UMTS customer systems around the globe.

Both Rutger Reman and Petra Lundmark emphasize Ericsson's strengths when it comes to the transition from 2G to 3G and being able to offer total solutions. That is something that should be emphasized more, and especially this year when marketing will be intense.

"We're working here in a really cutting-edge area, even if it is easy to forget that in one's everyday tasks," says Martijn Mortier, as he enthusiastically explains his job responsibilities at the Core Networks product unit.

He is from the Netherlands and has worked for the past five years at Ericsson, including the last 18 months in Sweden.

"My task is to support Ericsson's local companies when it comes to the sale of core networks. Until now, this has involved the Western European market area, but I have now moved to Kuala Lumpur in Malaysia in order to oversee the same job here in the Asia Pacific region," explains Martijn Mortier.

During his time in Sweden, he had time to learn a great deal about the Core Networks product.

Even if Asia is a little behind Europe when it comes to GPRS and 3G development, there is huge potential in the region, so there will be no shortage of work, according to Mortier. The Asian markets are important to Ericsson.

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FACTS/NEW CORE NETWORK

Second-generation networks were developed in order to deal with a specific service, such as a regular wireless phone call. With the introduction of the mobile Internet and 3G, a new kind of architecture is required – one where all kinds of services are accessible, regardless of the means of access and where the core network must be able to handle all kinds of traffic.

In order to meet these demands, today's vertical core networks are being developed with a new horizontal architecture.

The Core Networks product unit of the Mobile Systems division is developing and marketing the new core network, which could be considered the foundation for the mobile Internet.

Media gateway paves way for mobile Internet

➤ "We're working in such a fashion that even if we end up short on time, we can still make deliveries to customers. Our goal is to be the first to market," says Jarne Mäkelä, head of the Node Product unit, the unit that is working on the media gateway at Ericsson in Finland. The media gateway is an important aspect of the core network for the mobile Internet.

Jarne Mäkelä

The media gateway project officially got under way about a year ago, even though Jarne Mäkelä and a dozen others started working on the assignment as far back as two years ago.

"Today there are 120 people working on the media gateway in Finland, in both Jorvas and Turku. In addition, there are some 20 employees in Ireland and 30 in Oslo. Other groups at other companies and product units are also lending assistance during the development work. Altogether, the project employs almost 200 people."

Many in the project have previously been involved in AXE development and for those people, working on the media gateway has involved major changes, both in terms of work routines and the tools used. Several coworkers were used to work occurring in sequence. One of the important tasks that Jarne Mäkelä has had over the past year has been to direct operations so that everyone understood the new work methodologies and their role in the project. The work methods are nothing new for him, however.

"A few years ago I worked on PDC for Japan, and there we operated according to the principle that development would occur on an ongoing basis, without any handovers. Now, with the media gateway, we've gone one step farther and are working so that there is always a finished product ready to deliver to the customer. By working in this manner, it's easier to ensure that quality is assured right from the start. Being first to market is a key aim of the project."

The first release of the media gateway, MGWR1, was sent to Japan in February so that it can go into operation in October of this year, when the operator J-Phone plans to launch its 3G system. At the moment, verification and documentation are especially intensive work areas for the media gateway project.

Gunilla Tamm

FACTS/MEDIA GATEWAY

In the new horizontal core network, mobile switches in control servers and media gateways have been split up. The latter oversee the actual switch functions, such as speech encoding and echo cancellation, while the server controls traffic. In other words, traffic no longer moves through the mobile switch.

Media gateways play a key role in the new architecture. They exist along the edge of the backbone network and are overseen by mobile telephony control servers, directing traffic to the appropriate place in the access network or out to external fixed and wireless networks and the Internet. Ericsson's media gateways are constructed using Ericsson's Cello platform.

The hunt is on for tomorrow's top managers

Thousands of people compete for the few coveted places in Ericsson's Global Management Program, "Excellerate." The final round of evaluations for this training program, the crucible of many of tomorrow's top executives, is now under way.

Cecilia Freij will soon finish Excellerate, the program for future top executives at Ericsson. She is currently spending a trainee period at Airtel in Madrid and is working closely with Rosendo Urban, who is Ericsson's Account manager for Airtel. Photo: Fernando Moreno

➤ "Ericsson needs future executives with solid business backgrounds, executives who are familiar with and can work in widely varying cultures," says Sven-Åke Damgaard, manager and one of the creators of the Excellerate program.

He himself has worked in several different areas as line manager for Ericsson. This experience has been valuable to him in compiling the course, which is designed to be both attractive to applicants and internationally competitive. It is not easy to gain admission to the Excellerate program.

The basic requirement is at least two Master's degrees or the equivalent from the absolute top universities or business schools in the world. On top of that, applicants must have been among the best in their year, and have 1 – 4 years of experience working in the telecom industry under their belt.

"The requirements must be strict. The idea is to recruit top candidates who will be able to work in Ericsson's executive management team or at least on the level just below it," says Sven-Åke Damgaard.

"A modern top business executive has three tasks: to generate earnings for shareholders, to make it profitable for customers to buy from the company, and to ensure that employees feel motivated."

Only 25 accepted

Excellerate is a two-year program designed as a trainee course. The training takes place in both business and market companies within Ericsson, as well as with one of Ericsson's customers.

A new training session is scheduled to start in September this year, and the selection process is essentially complete. Slightly more than 3,000 people expressed interest in the program, but not more than 25 can be accepted. Several of the candidates who are not accepted are offered other options within Ericsson. The final selection involves six so-called evaluation days – three in Europe, two in the US and one in Asia.

"The reason for this is to ensure the group finally selected has the appropriate international mix. Ericsson is now a global company, and future management composition should reflect this," says Sven-Åke Damgaard.

The evaluation days involve meetings between course hopefuls and representatives of various Ericsson companies. The training program is financed by the companies, and many of them decide which candidate to place their money on during the evaluation days.

No one-way ticket

Once accepted, each program participant is assigned a mentor.

"The mentor is a highly-placed Ericsson executive. This person is to be available to provide support, advice and information, both during and after the program."

Sven-Åke Damgaard wants to stress that the Excellerate program is not quite a one-way ticket to a top position within Ericsson.

"Like other skillful Ericsson managers, sooner or later they must take the Ericsson Management Institute Executive Program.

"How far the person goes depends on his or her commitment, ability and hard work," says Sven-Åke Damgaard.

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Attracted by international scope

Cecilia Freij prefers life in the fast lane. She is one of the first group of Excellerate participants that will graduate this year, and she is aiming for a position with one of Ericsson's local companies.

➤ Cecilia Freij has just arrived in Spain to undergo her third and last trainee period. This time she will be working at an Ericsson customer – telephone operator Airtel in Madrid. Contact managed to catch up with her for a few minutes between meetings.

"It started with a bang. Airtel is about to launch GPRS here in Spain, with Ericsson as the supplier, so my schedule is packed with meetings and many last-minute questions," says Cecilia Freij.

On top of it all, she has not found a place to live in Madrid yet, so things are a bit disordered.

Cecilia Freij is 26 years old, born and raised in Gothenburg. She has a Masters degree in engineering from the Chalmers University of Technology and studied at the Gothenburg School of Economics and Commercial Law. She also spent one year studying at the Swiss Federal Institute of Technology in Zurich.

In addition, she has worked for extended periods in both New York and London. Cecilia Freij had no personal experience of Ericsson when she heard about the Excellerate program, but was attracted by the Company's international scope.

"Telecom is an exciting industry, and Ericsson also has an excellent reputation, so applying for this program felt entirely right," she says.

Chile for six months

Her first trainee period was spent at the Multi-Service Networks division in Sweden. That was followed by six months at market company Compania Ericsson de Chile.

"Switching from a business company to a market company was a major transition. At a market company, you have to show customers what Ericsson stands for, every day. I would really like to work in a market company in a few years."

Apart from the trainee periods, Cecilia thinks the course module that is repeated every four months is the most rewarding aspect.

"In these sessions, all program participants converge somewhere in the world for two weeks. In each session, we study a new Ericsson market area. It is also an excellent opportunity to compare notes, practice leadership or discuss your own situation with a friend."

Mixed groups

Of the 16 people in the Excellerate program, six are women. Cecilia Freij does not consider it a disadvantage to be a manager and a woman in a male-dominated company.

"My experience of Ericsson is that most employees, both men and women, consider it most stimulating to work in mixed groups. I am also convinced that we will see more female managers in higher positions in Ericsson in the future. After all, what really matters are the results you produce," she says.

Jenz Nilsson

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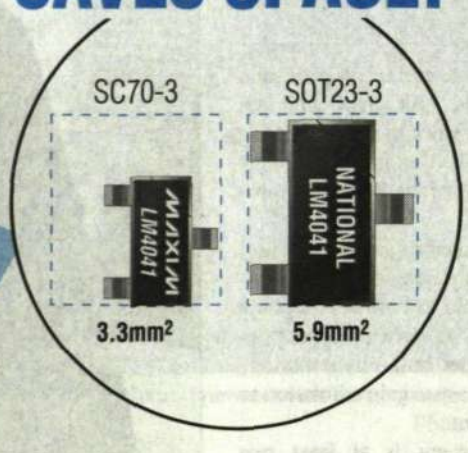

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LM4040_2.1	2.048	0.1	0.2	0.5	1.0	3-SC70	3-SOT23
LM4040_2.5	2.5	0.1	0.2	0.5	1.0	3-SC70	3-SOT23
LM4040_3.0	3.0	0.1	0.2	0.5	1.0	3-SC70	3-SOT23
LM4040_4.1	4.096	0.1	0.2	0.5	1.0	3-SC70	3-SOT23
LM4040_5.0	5.0	0.1	0.2	0.5	1.0	3-SC70	3-SOT23

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Village held together by needle and thread

In the Thai village of Mae Laka, 300 kilometers north of Bangkok, Ericsson supports a local seamstress cooperative. As a result of Ericsson's support, the women there can stay with their families instead of being forced to work in factories in Bangkok, or in the worst case, prostitution.

For Argewan Sab-Go, the Ericsson-sponsored sewing center enables her to stay at home with her children instead of traveling the 30 miles to Bangkok to look for a job. Photo: Anna Ivemark

➤"If it weren't for the sewing center, I would probably have had to leave my daughter with relatives to go and look for a job in the city. Now, I can afford to stay." These are the words of Argewan Sab-Go, 35, who works at the Mae Laka sewing center, one of two such centers in central Thailand that are supported by Ericsson.

Piboon Tharaputi

"It's a matter of helping people help themselves. Instead of giving people fish, we want to teach them to fish," says Piboon Tharaputi, human resources manager at Ericsson Thailand.

The sewing center provides employment for 14 women between the ages of 18 and 60. The sewing machines purr like mechanical cats throughout the modest building.

Someone sits with a child in her arms in front of her machine, others chitchat while the pile of delivery-ready children's clothing grows. Laughter is frequent in the sewing center.

Two harvests a year

Surrounding the village the rice fields lie like green mats rolled out over the fertile landscape. This part of central Thailand has two harvests a year. However, it is arduous work that brings minimal incomes. A family cannot manage on agriculture alone and in the interim periods between the harvests many people are forced to work in the big cities to make ends meet.

"The result is often the breakup of families, or young girls being forced into prostitution. We want to counteract this trend by developing the rural areas," explains Pornpan Suna of the People and Community Development Association, which cooperates on the project with Ericsson Thailand.

It is called Corporate Citizenship and it is about companies taking responsibility not only for their own operations but also for societal development in the country in which they are operating.

In Mae Laka, Ericsson's support took the form of training in subjects such as bookkeeping, and providing a loan for the purchase of sewing machines.

Loan payments are deposited in an account for future investments. Ericsson also arranged a contact with a dealer in Bangkok for which the women are now sewing children's clothes. In addition, Ericsson employees have contributed unpaid work.

The income the women earn is modest, but it is sufficient to enable them purchase necessities.

"It used to be difficult to find work here. I made straw hats, but I still had to borrow money every month to make ends meet. Now, I earn 5,000 bath (USD 125) a month and it's enough to live on," says Chan Sab-Go.

At 60, she is the oldest in the collective, and a widow. The elected group leader, it is she who manages the accounts and ensures that every worker receives the proper salary, depending on how many clothing details she has sewn together.

Chan Sab-Go herself works 13 hours a day, but the amounts of time the women can spend sewing varies.

Annual collections

The sewing center has spawned new enterprises. In a nearby building, Duangdung Paothong started a small bakery that employs eight women. Earlier, she was the supervisor of the seamstresses.

"I learned a great deal there, particularly when we were starting up, and I had to persuade the others to get involved in the project. That experience stands me in good stead now, when I have to market the bread I bake here."

In Thailand it is common to help society's less fortunate members – charity is part of the culture.

Every year, several collection rounds are held at Ericsson Thailand, to provide assistance, for example, after natural catastrophes such as floods. Collections from personnel can gather in anywhere from USD 200 to USD 1,000, but they might also gather clothing and books for orphanages and so on.

"I spoke about our work with the sewing centers at a meeting with human resources executives from other companies. Lucent is now planning a similar initiative. By me that's great: as long as it helps the people and the country," says Piboon Tharaputi.

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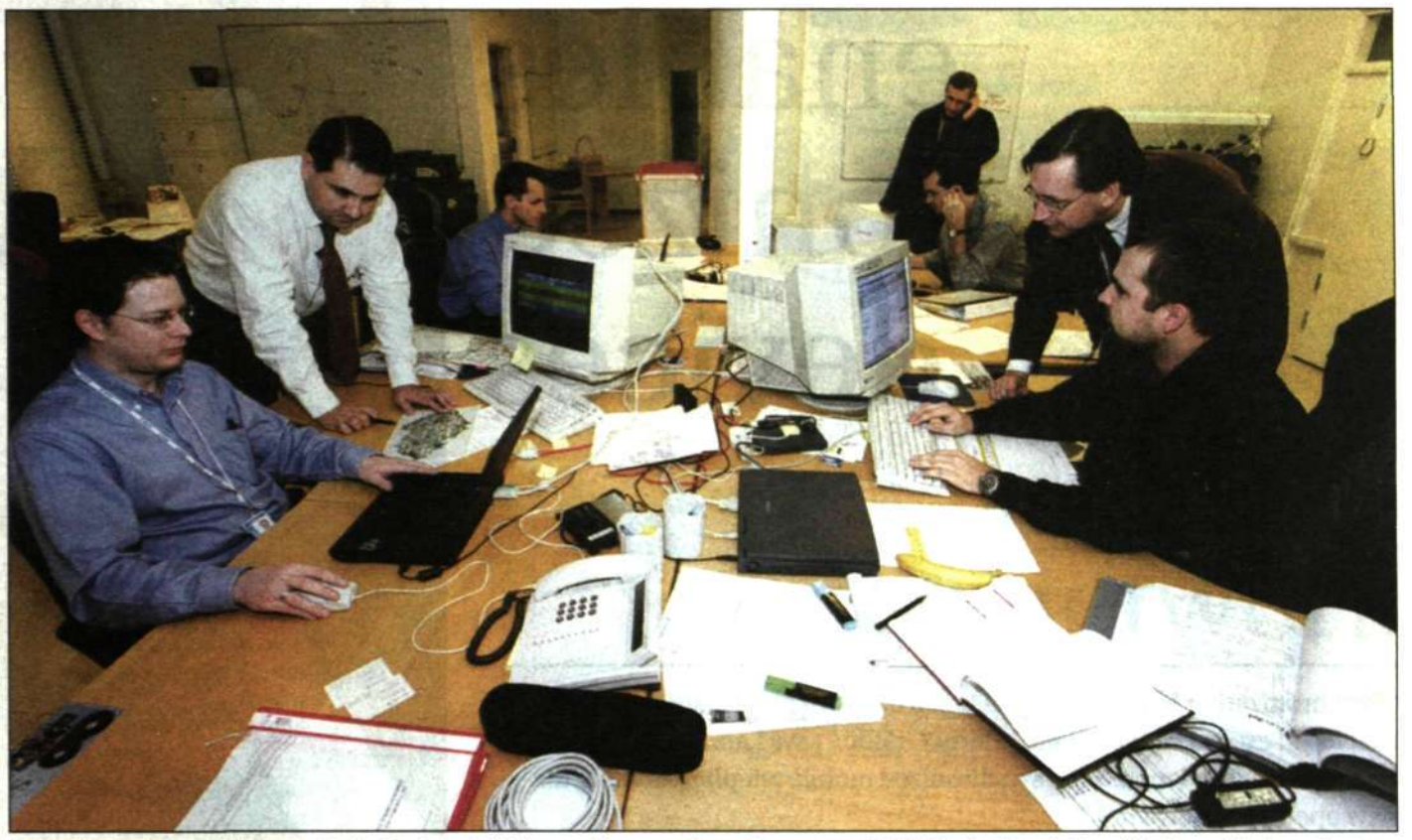
Tips on how to secure a 3G contract

The 3G revolution is fast approaching areas outside Western Europe and Japan. Ericsson Radio Systems in Kista is sharing its expertise with local companies. In a special bid workshop, employees from various countries are learning how to write 3G bid proposals.



At the bid workshop at Ericsson Radio Systems in Kista, work is currently underway on a 3G bid for the Czech Republic. From left, Arne Casteleyn, sitting, Elias El-Hashem and Mikael Eklund, standing, and Martin Stech, sitting. Photo: Ecke Küller

➤ "Even though GSM expansions and GPRS are being given the most prominent focus in our markets, our local companies need to start looking ahead and prepare themselves for 3G," says Mats Storsten. He works at the WCDMA and PDC business unit, where he is in charge of sales and business management for two market regions – Central Europe, the Middle East and Africa (CEMA) and The Americas.

Mats Storsten

The WCDMA and PDC business unit, which was created in the reorganization of Mobile Systems last October, has total responsibility for WCDMA.

"In a few markets, such as Poland, the Czech Republic, Slovenia and Israel, we're already hard at work on 3G bidding, while in Canada we have a contract with Rogers AT&T Wireless for 3G," explains Mikael Eklund, head of sales and business administration for the CEMA market region.

He emphasizes that 3G involves not only new technology, but also new business models. For operators, this means new business opportunities, which have to be spelled out through the use of business plans and future scenarios.

In order to create an understanding of what will be required for 3G, managers from a number of Ericsson companies within CEMA were invited to a conference held in London last autumn.

This was followed by a kick-off event in Sweden last December for Key Account Managers from those same countries. Workshops were also held last autumn for several operators, with members of the executive team representing Ericsson.

The WCDMA and PDC business unit in Kista has been operating a bid workshop for the past year, attracting employees from Ericsson's local companies who wish to learn about writing 3G bids and want to network within the business unit. The end result is thorough training in Ericsson's 3G world.

Varied lengths of stay

Ola Svensson, who coordinates activities at the bid workshop, as well as the on-the-job training that occurs there, explains that several hundred people have worked for short or long periods of time at the bid workshop and the product units. Some stayed a few weeks, while others remained for up to a year. Now it is time for companies within CEMA and The Americas to continue these successful and effective skills-development efforts.

"It's very informative to work here and serves as the best possible gateway for learning about 3G. The knowledge that one acquires, serves as a valuable foundation for a continued career at Ericsson," he says.

When *Contact* visited the bid workshop, work was being conducted on a bid for Eurotel, the largest of the three Czech GSM operators.

"There are approximately a dozen of us here from Ericsson in the Czech Republic, working on a 3G bid for Eurotel. I'm staying about two weeks," says Martin Stech.

Quick bids

Altogether, there are approximately 20 people working on the bid. Included in that group are also employees from other countries such as Arne Casteleyn from Belgium and Elias El-Hashem, who works in marketing at Ericsson in Lebanon.

"I'm going to stay six months, and the knowledge that I acquire here will be shared upon my return home. I'm learning the correct procedures for bidding, which means we won't have to reinvent the wheel once 3G licenses are issued and bids need to be tendered quickly. By utilizing the same work procedures and reusing existing bid materials, we will be able to maintain the same high standard for bids," says Elias El-Hashem.

"When GSM was introduced approximately ten years ago, we had more time on our hands, but that will not be the case with 3G. Consequently, it is essential that all of Ericsson's companies are well prepared by acquiring the necessary expertise and devoting resources to the '3G race,' since competition will be extremely intense," says Mats Storsten.

While 3G licenses are now being issued at a rapid pace in Europe, they are further behind in The Americas region. One of the reasons why 3G licenses are not expected to be issued there for some time is that the frequencies allocated are not yet available. Nevertheless, 3G preparations are already underway, and a workshop and kick-off event were held in Dallas, Texas, late last year.

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Hungary and Israel on the starting blocks

➤ Both Hungary and Israel have plans to issue 3G licenses. Preparations for this technology shift have been initiated at Ericsson's companies in these countries. This includes acquiring 3G expertise and learning how to make bids.

"Three months ago, we formed a working group with our GSM customer Partner Orange, and together we have conducted various activities to prepare ourselves for 3G. This has included technology and business models," explains Edvard Gavefalk at Ericsson in Israel, where he is the Key Account Manager for Partner Orange.

Several employees from Ericsson in Tel Aviv will also be going to Sweden to work for three months as part of the bid workshop at Ericsson Radio Systems in Kista.

"It's great that this opportunity exists and that it is possible to choose how long you want to work in the bid workshop. Preparations for 3G are important for us, since four licenses will be issued in July," says Gavefalk.

In Hungary, no 3G licenses will be issued until 2002. Nevertheless, the path towards 3G is already starting with GPRS. Istvan Fodor, President of Ericsson in Hungary, explains that two of the country's three GSM operators have selected GPRS equipment and that they have chosen Ericsson.

He was one of the participants at the 3G conference organized in London last autumn for some of Ericsson's companies in the CEMA region – that is, Central Europe, the Middle East and Africa.

"It was a very informative conference and I hope it will be repeated as more information about 3G becomes available," he says.

At the same time, Istvan Fodor emphasizes the importance of knowledge about UMTS and WCDMA and points out that several employees have been to Sweden, and another to Japan, in order to learn more. There are also plans to hold an internal conference on 3G.

"We intend to expand our expertise, which will not only be utilized here in Hungary, but could also be of use to other Ericsson companies around the world," says Fodor. "3G is also an important field for the research and development center located at Ericsson in Hungary."

Gunilla Tamm

Open protocol enables synchronized devices

"Remote synchronization is going to be very big and may even exceed conventional Internet traffic," predict Andreas Jönsson and Lars Novak, who are the project and product managers for the new synchronization function in Ericsson terminals.

Photo: Lars Åström

"Synchronization between devices is starting to explode, and we believe that it will exceed conventional Internet traffic," says Lars Novak, who is leading the efforts to develop synchronized mobile telephones using the new open protocol SyncML.

➤ Local synchronization of the address book in a mobile phone with a calendar on a desktop PC, for example, is no problem. An infrared link is all that is needed. Remotely synchronizing calendars on all devices from any location and at any time, however, is completely different.

Previously there was no standard. Every vendor had their own solution. In December of last year, however, a large group of leading manufacturers agreed on a protocol called SyncML. Synchronization Markup Language, which is a language that requires little bandwidth.

The group included Ericsson, Nokia, Palm, IBM, Motorola, Psion, Starfish, Lotus and Matsushita, but not Microsoft. However, the standard is now supported by more than 600 additional manufacturers and operators. SyncML works over both cable, infrared and radio, including Bluetooth.

"Formal standardization work began on February 28, 2000, and just three and a half months later, Ericsson was able to demonstrate SyncML on a prototype R320 phone," says Lars Novak. "Synchronization takes place between the terminals and a server, and because we are also conducting a project for the server, we can now offer a total solution from client to server.

"Nokia was the first to introduce SyncML in its Communicator product, but we will have products on the market by summer. We are also the only ones who have demonstrated the technology over WAP, which is a faster transport protocol than http or ObEx (Object Exchange Protocol)," says Lars Novak.

Linking wireless devices to the server

Typical applications include synchronizing a user's mobile phone and PC, but SyncML can also handle multiple terminals and group scheduling for a sports club, for example. SyncML can also provide a backup for a user who has lost a phone.

Remote synchronization assumes that there is a server somewhere on the network that stores information. The mobile phone or other wireless terminal that is to be synchronized has a synchronization function that is built in the same manner as the server (see illustration).

The telephone has a Client Agent that corresponds to a Server Agent on the server. Synchronization takes place between the two agents. This is where the intelligence is. It is the agent that initiates synchronization and knows what must be synchronized.

The Client Agent accepts commands from the mobile telephone user to change the calendar or the telephone book. These commands are then forwarded to the SyncML toolkit, where they are translated into an XML document that can be sent over the network.

Via WAP and the GSM network, the document reaches a WAP gateway, where it is transferred via the Internet to the synchronization server. This server contains an identical toolkit that analyzes the document and translates it for the server agent, which then updates the relevant databases. Updates from the server to the telephone are transferred in the same manner.

Synchronizing five changes in a calendar, for example, does not take more than 10 to 15 seconds, if the terminal is turned on. Currently the user must start the process, but when use of GPRS becomes more widespread, synchronization will take place completely automatically, and users can always be sure that the information in the telephone is correct and up-to-date.

"Remote Synchronization is a perfect application for GPRS," says Lars Novak. "Several major analysts, such as the Gartner Group, expect that synchronization traffic may exceed the traffic generated by web browsers."

Security in several steps

To ensure that synchronization is secure, several steps are taken. The first step is authentication, which is followed by the data exchange itself. Thereafter, a check is performed to ensure that the synchronization is correct. Full security requires encryption and what is called object security.

The version 1.0 product that is now available contains virtually all the essential functions.

"We will continue to expand and enhance the protocol, and future versions will provide more advanced features," say Lars Novak and Andreas Jönsson, a technical expert who is responsible for the implementation of SyncML.

"We believe, however, that nearly everything can be done with version 1.0 and that you can synchronize with just about anything, regardless of the data type. The major benefit is that the information finds me. I don't have to go looking for it. With a small local database on the telephone, everything works much faster and is much less expensive than accessing a portal," says Andreas Jönsson.

SyncML will be included in all of Ericsson's forthcoming volume products. Only new software is required, not new hardware. The only prerequisite is a WAP phone.

Lars Cederquist
lars.cederquist@lme.ericsson.se

FACTS/SYNCML TOOLKIT

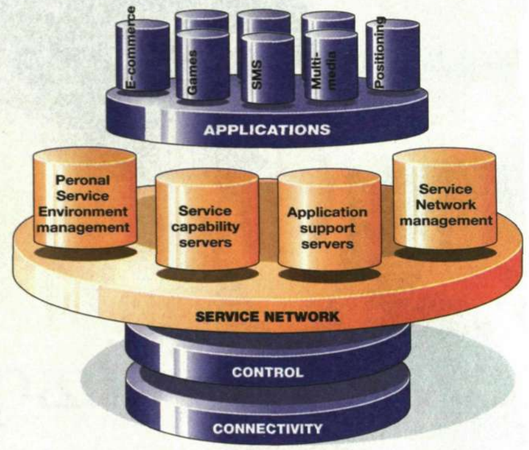
An important component in the synchronization process is the SyncML toolkit, which is software that translates the synchronization commands into an XML document and vice versa. The SyncML toolkit, which was developed jointly by the SyncML organization's members, is written in C and the source code is available for all to use. The toolkit is intended to make it easier for companies to include SyncML in their products and to get all products to work together. One example was provided at the SyncML conference in Dublin in August. At the conference, Ericsson representatives met a French company that had compiled a large database containing all the telephone numbers in France. Like Ericsson, the company had used the SyncML toolkit.

"We entered the URL to their server and synchronized with our R320 telephone. It worked the first time, even though there was a lot of technology involved. It was completely fantastic and due entirely to the toolkit," says Lars Novak.

The SyncML toolkit is independent of the operating system and has already been verified on several systems, including EPOC, Palm, Linux, and Windows NT.

Now there is a standard called SyncML that allows users to always keep their calendars updated and synchronize several different terminals.

SERVICE NETWORK SERVER APPLICATIONS



Graphics: Martin Gradén

Service network to sell 3G

At the GSM World Congress in Cannes, Ericsson launched its new Service Network server platform that will make it easier for operators to manage the hundreds of new services and applications being developed, primarily for 3G networks.

➤ A news item on page 5 in this issue describes how Ericsson is launching the Service Network platform. This article describes how it is built.

Currently there is a great need for a structured, yet simple service network that allows operators of mobile, fixed, IP or cable networks to manage the many applications being developed.

The vertical structure of telecom networks, in which each network type is an entity unto itself with its own billing, operations and management systems and databases, is being turned on its side and transformed into a horizontal architecture.

An application layer is being split off from the core network that is responsible for transporting data and is shared by all systems.

New architecture

The illustration above shows how the Service Network is positioned in the new architecture between the application layer and the core network, which consists of a control layer and a connectivity layer, which are in contact with the various access networks.

A new open service architecture with standardized interfaces is now being introduced throughout the entire data and telecom industries. Standardization is being handled by 3GPP, a partnership for third-generation systems, and Ericsson is supporting the new Open Service Architecture standard with open interfaces, such as Parlay.

What makes Ericsson's Service Network solution unique is the Personal Service Environment Management and the Service Network Management, SNOS, components.

The operator's eye

The former provides a user-friendly tool for personal services and a portal for end users that allows users to register for services, without going through a customer service center.

The other, SNOS, which is Ericsson's specialty, is the operator's eye on the network. SNOS monitors faults and alarms, controls what is on the network and provides a billing gateway that allows customers to be offered different payment models that are not just based on time.

This is expected to be a very important application in the future. Other services can also be added quickly.

Service Capability Servers are servers that are required for distributing services in the network.

These include WAP Gateways or a Camel Server, which allows users to take services with them anywhere in the world. Application Support Servers are support services that optimize network performance, for payments for example.

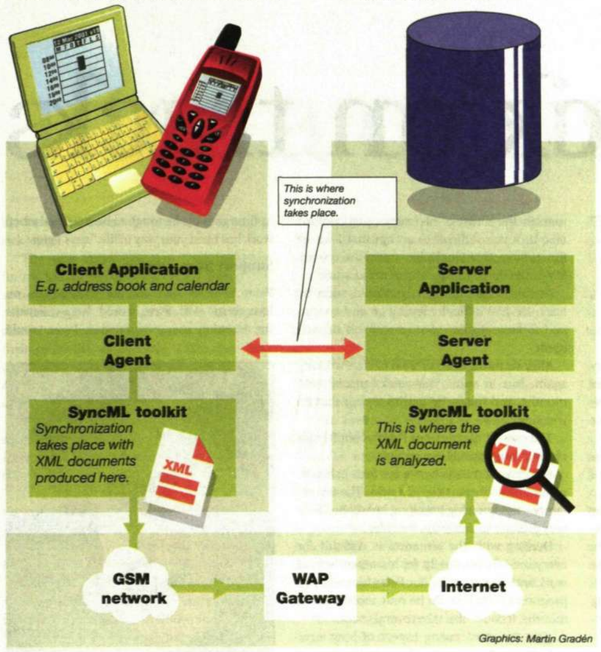
The Service Network is primarily designed for GPRS and the other existing standards, but it will eventually also support 3G networks.

Lars Cederquist

SYNCML CREATES ORDER IN ADDRESS BOOKS AND CALENDARS

With the new SyncML function, you can synchronize the contents of the phone book on your cell phone with the address list on your PC.

The basic principle is that the user's various devices are synchronized against a database on a server.



Graphics: Martin Gradén

"Isolation is the most difficult thing about an extended illness," says Peter Schantli. "For someone who is used to a fast pace, it's difficult to be sidelined from working life." He believes that coworkers can help a great deal in making a sick person feel better.

Photo: Jezzica Sunmo

Getting back on track after a crisis

Slightly more than two years ago, Peter Schantli was a successful sales manager who loved his job. But he was demanding too much of himself, and in autumn 1998, everything collapsed. Peter has now been on sick leave for slightly more than two years and his life has changed radically.

➤ For Peter, work had always been the most important thing in his life. Working in sales was what he really loved. Even as a twenty-year-old, he was extremely ambitious and achievement-oriented, and set himself career goals to achieve before the age of 30. At 25, he would be product manager, and by 30 he would have his own company and be company president. Now, at 42, he can say that he succeeded in reaching his goals and more. In 1997, Peter was recruited by Ericsson, as sales manager with the Consumer Products division.

"I was incredibly keen, but I realized fairly quickly that the organization had weaknesses and that it was not really clear who was responsible for what – which was both stressful and frustrating."

There were warning signals such as abnormal tiredness and muscle pains, but Peter ignored them, trudged on and tried to maintain his enthusiasm. But in the last year, his health declined rapidly.

"I put all my energy into managing customer contacts perfectly. When I came home, I would simply collapse in the sofa."

In addition to the tiredness and the aching muscles, Peter had become impatient and extremely irritable. The stress became too much, and one day he simply sat and stared at the computer.

He was completed exhausted, emotionally and mentally. Peter was signed off sick, suffering from stress-related exhaustion.

"There was also a feeling of shame – that I, a man in the midst of his career, just couldn't take it. It was difficult to accept that I wasn't functioning, that I had fallen out of the system. My professional role had been my identity."

At first, Peter thought he would soon be back. He had difficulty letting go and continued to have regular contact with his department.

After six months, Peter tried to start working again, but in vain. The weeks turned into months, and finally he had to accept that he was sick.

The correct diagnosis of Peter's condition is chronic fatigue and fibromyalgia.

For Peter, it means he always feels exhausted and has constant muscle pain. The uncertainty – not knowing how long he will be ill – is very difficult to deal with, Peter feels.

Dealing with the situation is difficult for everyone – for his family, for his supervisors at work and, in particular, for Peter himself. The prognosis is that, while he may recover in six months, it could also take several years.

"But the most taxing aspect of long-term sick leave is the isolation it involves, worsening as time goes by. It's tough to be sidelined when work has been your way of life," says Peter.

Support from a group

Peter believes that contact with others on long-term sick leave could help alleviate the isolation many experience. Peter would like to see a network for people on extended sick leave.

"The ways things look now, it is impossible for me to have contact with other men in the same situation."

Peter feels that women have a head-start since they generally find it easier to talk about their problems with others. When men find themselves in a crisis, they discover that they are actually alone, which can precipitate another crisis, Peter believes.

When Peter's emotional state was at its lowest, his behavior was threatening to destroy his marriage. There was period when his relationship with his son also suffered.

"I remember once asking my son how he thought of me as a father. 'You're kind of an angry dad,' he said. That wasn't nice to hear."

Today, Peter has accepted that he is sick and he tries to make the best of his situation.

"It is important to try to keep regular hours. I always get up at the same time and I eat breakfast every morning. Then I have to rest a few hours in order to be more or less alert when my family comes home."

Peter has struggled to regain his health. He has followed various courses of treatment provided by company medical services, and he has met psychologists and learned relaxation techniques. Reading about the illness has been another way of trying to understand what it is that afflicted him and why it happened.

No concrete action plan

Peter is largely satisfied with the support he has received from his employer.

"The company medical services are very helpful. What is not provided, however, is a concrete action plan regarding contacts between me and the company. So far, all contact has taken place on my initiative."

Peter believes we tend to leave a sick person in peace because we are afraid of causing too much stress, which, while it is considerate, merely increases the sick person's isolation. And this applies not only to managers but also to colleagues.

"As a colleague, there is a lot that can be done to help the sick person through simple kindness – asking if it's okay to call, and perhaps agreeing on how frequently and in what way the sick person would like to maintain contact with the workplace."

Even though Peter lost his entire professional identity, he feels that the time spent on long-term sick leave is his greatest achievement.

"Even though it is a crisis that was forced upon me, it has led to a deep insight into my feelings. I have become aware of my deficiencies and weaknesses, and I have developed as a human being. I can appreciate small things in life and have been forced to realize that life is not only about performance. Taking a walk with my wife in the sun or preparing a nice meal is more than enough to make a successful day."

He can certainly consider coming back to work one day. However, he would like to do what he is best at doing within clear boundaries, so that he does not fall into the stress trap again.

Ulrika Johnsson
freelance journalist

FACTS/**PETER SCHANTLI**

Workplace at Ericsson: Consumer Products division, Cardphone unit.
Education: Marketing economist.
Family: Wife and one son.
Home: House in a suburb of Stockholm.

The company can help

"It's always a good idea to call and say hello to someone who is away on sick leave. It rarely makes things worse," says Anne Peterberg, company physician at Ericsson in Sweden. "Unfortunately, we have a tendency to distance ourselves instead."

➤ The number of employees on sick leave at Ericsson is still relatively low, Anne Peterberg believes – on average, two days per year and salaried employee. However, as in society in general, we can expect on increasing frequency of sick leave due to stress-related illnesses.

At Ericsson, efforts have been under way for about a year to develop a model to identify and treat stress-related illnesses at an early stage.

The model includes training, surveys and various types of treatment. Activities offered include mental training and relaxation techniques. In more advanced cases, the company can provide more extensive help. Isolating the person from his or her work is avoided as much as possible.

Anne Peterberg

"We believe that staying in contact with one's job is extremely important, so we try to keep the person at work as much as possible. Someone suffering from negative stress, or what we nowadays call chronic fatigue syndrome, can still participate in coffee breaks, meetings and lunches, but be relieved of other duties."

However, if the situation has reached the point at which the stress has caused a serious illness, the person has to be given sick leave. It is important, then, not to lose contact with the workplace.

At a company like Ericsson, characterized by rapid development involving major reorganization processes, it is important that the supervisor maintains close contact with the employee in order to help the person and protect the person's interests for the duration of the period of absence.

"If the manager cannot cope with this extra demand, the company can provide a special contact person – a 'coach' – who can help the sick employee, by attending meetings, for example."

It is also important to contact the company medical services, Anne Peterberg points out.

"They are aware of the relationship between work and illness, which is not always the case with district medical centers. Company medical services are also the agent through which the employee can obtain the help the company offers."

When it is time to return to work, it is important to start off at an easy pace, to ensure that the transition is as smooth as possible.

"You start with a few hours a day, gradually increasing the time as you feel you can cope," Anne Peterberg explains.

This way, returning to work need not be the kind of shock that it often is when someone has been on sick leave.

Ulrika Johnsson

Sleek phones tour Europe

Two of Ericsson's mobile phones have been included in Riksutställningar's 3D+ European tour of Swedish industrial design. The design exhibit is intended to provide Europeans with an opportunity to get to know Swedes better.

➤ Ericsson's T28 and R250s Pro phones are on display, together with 84 other items, in an effort to portray Sweden as a designing nation. The 400 square meter large exhibit includes a selection of unique articles from 57 different designers.

"We've chosen items that demonstrate the breadth and user-friendliness of Swedish design. Mobile phones play a key role in both work and leisure activities for Swedes, so they were an obvious choice," says Christina Molander, press relations spokesperson and head of marketing for the 3D+ project.

Currently, the exhibit is showing in Brussels, and will continue on to Berlin and Dublin, before returning to Sweden late this year.

3D+ was produced by Riksutställningar and Svensk Form with support from the Swedish Government Offices and the Swedish Institute, and is part of a cultural campaign being conducted in conjunction with Sweden's EU chairmanship.

"While we think that Ericsson's phones have been somewhat boring in the past, the T28 and R250s Pro both demonstrate serious design ambitions and say a lot about Swedish mentality," says Pernilla Åbrink at Svensk Form, who was involved in selecting items for the exhibit.

Lena Widegren
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ERIC & SON – A TRUE STORY

Find love using mobile phone

»» If you happen to live in Asia, you probably have the greatest chance in the world of finding your partner through wireless dating. Take, for example, Hong Kong's wireless dating service, Cupid. It connects lovesick people with the help of a comprehensive questionnaire.

Cupid also informs users of potential partners who are currently in their immediate vicinity, so that quick meetings can be arranged.

In Seoul, people who sign up for the Duo Matching Service receive a free phone. In Tokyo, those who are willing to pay can subscribe to Nozze Navi, a high-tech dating service from the Marriage Information Center. The service even offers the option of using a videophone to actually view potential partners during calls.

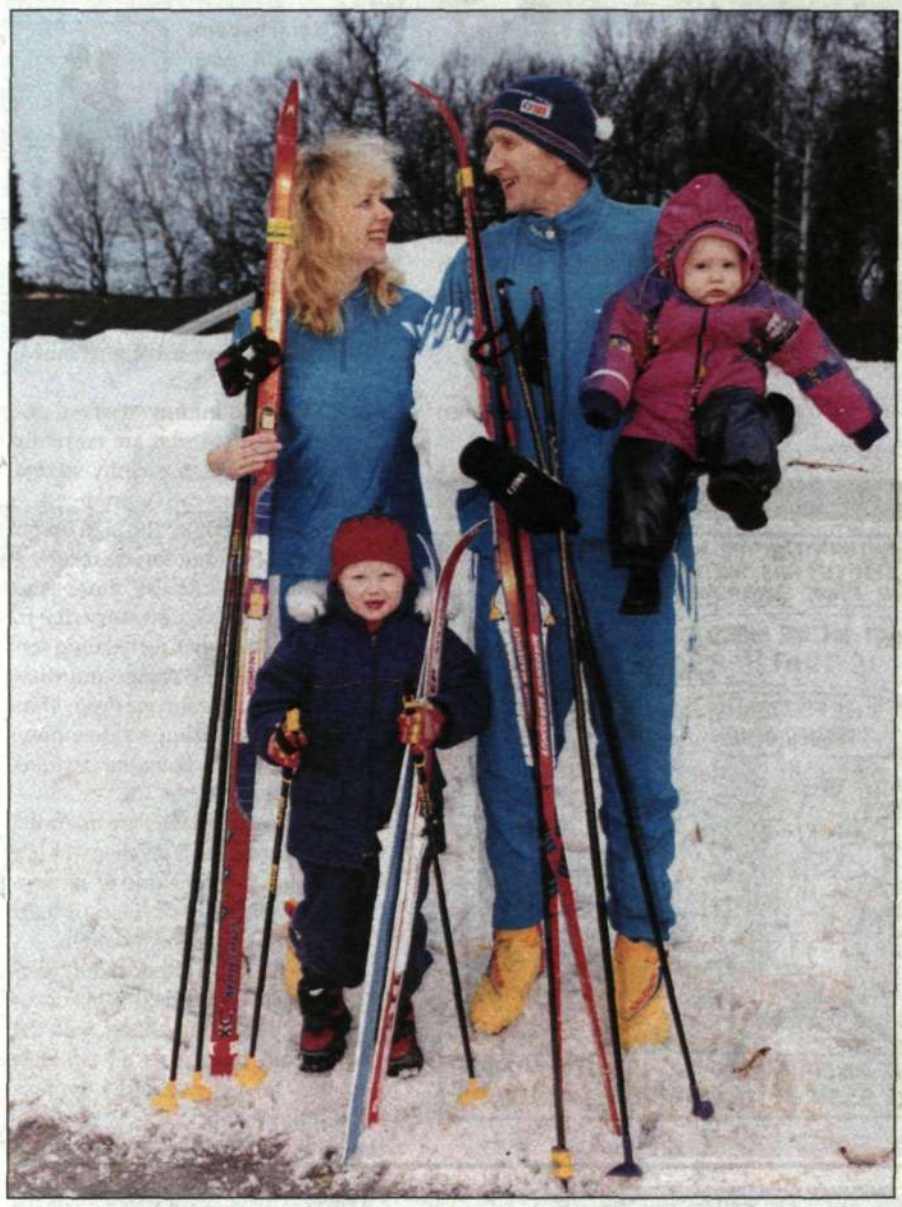
For those men who are not quite ready to take the leap, there is Love By Mail, a different kind of wireless dating service that is especially popular among Japanese men.

As with most other dating services, selection and courting occur primarily over the phone, with the difference being that all available dates are, in actuality, preprogrammed scripts.

No. 4,
March 8,
2001

contact

Ericsson, HF/LME/DI,
Room 811023,
SE-126 25 Stockholm



Romance on the trail. Kerstin Ahlforn Enlund and Terje Mathisen are both employed at Ericsson. Together they share a passion for cross-country skiing and Sweden's famous Vasalopp ski race. Their children, Unni and Teija, were both born in Mora, the site of the race.

Photo: Ecke Küller

Kerstin and Terje found romance on the ski trail

Over 15,000 cross-country skiing enthusiasts competed in this year's 90 km Vasalopp ski race in Mora, Sweden. More than 70 of those were Ericsson employees. *Contact* found a "Vasalopp family," who met through training and whose first child was born in Mora – during race week.

➤ Terje Mathisen and Kerstin Ahlforn Enlund are frequent and enthusiastic exercisers. Terje participated in the Vasalopp cross-country ski race for the twentieth time, while Kerstin skied in the Women's Vasalopp race for the fourth time.

Both share a passion for nature and the outdoor sports of orienteering and cross-country skiing. The couple met at Ericsson ten years ago and quickly realized that they had the same recreational interests. Today they are married and have two children of their own, Unni, age four, and Teija, age one, as well as five adult children.

Neither sees a conflict between being parents of young children and taking the time to work out as much as they do.

"Whether I'm training for the race on skis, or roller-skis as has been the case during this winter when there has been little snow, I pull the children behind me on a sled. That gives Kerstin a little time to herself, and it's the same when Kerstin trains," says Terje Mathisen, who lives in suburban Stockholm.

"For me, working out is very important – the more intensively I work, the greater the need I have to exercise," says Kerstin Ahlforn Enlund.

She is a project manager for delivery development within 3G, in the WCDMA business unit. Terje works at Ericsson Utvecklings AB, on public telephone systems.

Although Terje Mathisen works out frequently, he does not find that it takes up too much time. On Mondays and Fridays, he runs twelve kilometers to work and bicycles home. On Tuesdays and Wednesdays the couple practice orienteering together with their children. Frequently, there is some kind of race on the weekends.

"I should really demand mileage compensation," laughs Terje, "Since I haven't taken a single sick day during the twelve years that I've worked here."

Neither has Kerstin. She works out three times a week, training by walking with ski poles or participating in oriental dance, orienteering, strength training and aerobics.

Their first child together was dubbed the "Vasalopp Baby" by a reporter who found out that Unni had been born during the days between the pre-race and traditional Vasaloppet race – Terje skied in both. He skied with a headset and mobile phone so that he could be reached if contractions suddenly started.

2001 marks the second successive year that Ericsson is the main sponsor of the Vasalopp ski race. In collaboration with IBM, the company has made it possible to track a specific racer using a WAP phone, or five skiers plus the leader using the Internet. Every skier is given a computer chip to be attached on a band around their ankles, allowing antennas in the ground to keep track of them.

"I'm going to try to track my husband on the ski trail using my WAP phone," says Kerstin.

Ulrika Nybäck
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http://fun.ericsson.se

www.vasaloppet.se

FACTS/VASALOPP RACE

How: On cross-country skis.
When: First Sunday in March each year.
Course: From Sälen to Mora in Sweden.
Length: 90 kilometers.
First Vasalopp Race: 1922.
Number of Vasalopp Races organized since the beginning: 77.
Did you know that: Each participant loses about three kilos of bodyweight during the race (mostly fluids).

UPCOMING

March: Ericsson's annual report distributed to shareholders.

March 20–22: CTIA trade show held in Las Vegas. 700 exhibitors and approximately 30,000 visitors expected to attend.

March 23–28: World's largest telecom and IT trade show, CeBIT, takes place in Hanover, Germany.

http://inside.ericsson.se/cebit01

March 28: Ericsson holds its Annual General Meeting.

April 3–4: IBC Annual GSM in Northern Africa Conference, to be held in Casablanca, Morocco. Ericsson is the main sponsor and will be on hand with a display and speakers during the conference.

UPDATES

February 20–23: GSM World Congress 2001 was held in Cannes, France.

NEW ASSIGNMENTS

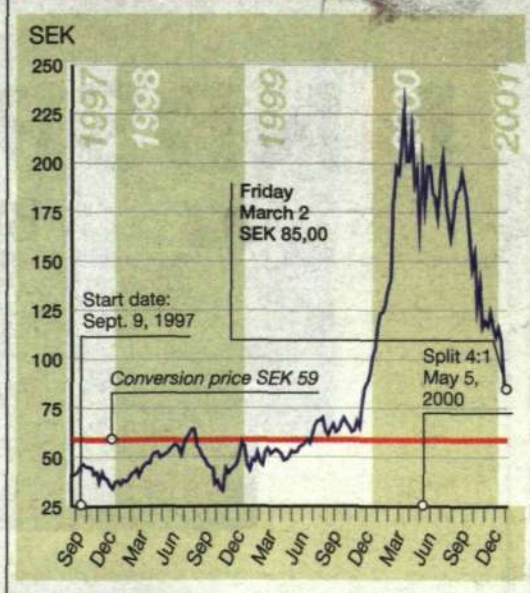
Gerhard Weise is succeeding Bengt Forssberg, who will be retiring in May, as Executive Vice President and head of the Latin America market area. Gerhard Weise will assume the position on May 15, while simultaneously retaining his position as head of Ericsson in Brazil through July 1.

Peter Källberg, currently head of Ericsson's operations in Malaysia, will become the new head of Ericsson in Brazil, succeeding Gerhard Weise on July 1.

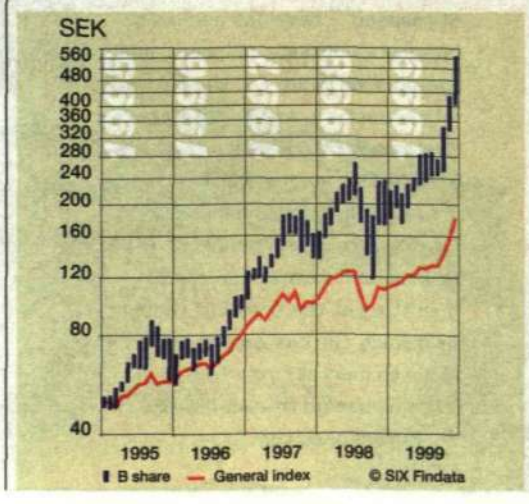
Per Ingelhag, of Ericsson Microwave Systems, has been named an Expert within the field of ASIC Technology.

Anders Djupsjöbacka, from the Data Backbone and Optical Networks division, has been appointed Expert in the field of Optical Device and Transmission Technology.

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 May 30, 2003. For additional information, access the website: http://inside.ericsson.se/convertibles



vacancies AT ERICSSON

This is a selection of vacancies within the Ericsson corporation. You can find these and more at: www.ericsson.com/jobs.

To advertise, mail your adverts to: employment.adverts@lme.ericsson.se.

Contact No. 4 2000 **Updated February 23**

DIVISION GLOBAL SERVICES

NO & M –
Personnel for Nigeria

Division Global Services is fast becoming recognized as the face of service excellence for the new millennium. As one of six divisions of Ericsson, our role is to deliver exceptional customer service as an integral part of the Ericsson offering. We are now looking to expand in order to face the very exciting challenges ahead – and you could be a key element in our success. To find out more about this new force in service solutions please visit our website at: http://globalservices.ericsson.se

The Project Office at TM&PS helps different functions within Ericsson by providing resources for various projects within the EMEA-region. We are now looking for personnel, ready to work on long or short time contracts in a different and exotic part of the world, working with the NO&M project to build up the GSM network in Nigeria. The project is planned to last two years and is to be started in May-June-2001. We are initially looking for people ready to man the following positions:

System Engineers,

MSC/HLR/VLR/SSF

System Engineers,

AUC/EIR/SMS/VMS

System Engineers,

BSS

System Engineers,

IN/PPS/SCP

System Engineers,

DXX/SDH/Minilinks/Transmission

System Administrator,

OSS/MMIS/SMAS/Netman/RGW

Surveillance Engineers

Field Technicians

● In addition to training, education and skills, it is also essential that you have: Cultural awareness. Good knowledge in English. Technical education within Telecommunication. Valid Driving license.

You must also be prepared to take on the role as instructor and trainer for the local employees that will eventually take part in the project. If you feel that you are ready for this challenge, please come back to us! (Please note that latest application date is 2001-03-12.)

Contact: M. Samara, ERA, Telefonv. 30, 126 25 Stockholm, +46 8 7198741, +46 70 205 5865, murshid.samara@era.ericsson.se.

Telefonaktiebolaget LM Ericsson has been involved in various projects in the Kingdom of Saudi Arabia since early 1970'ies. The first digital switch as well as the first mobile system (NMT) was delivered to Saudi Arabia.

This exciting history is now repeated in the leading role as the main preferred partner to STC (Saudi Telecom Company). Ericsson is managing the supply, commissioning and implementation of state-of-the-art infrastructure for the GSM system expansion.

This covers demanding deliveries of Switching, Hardware, sophisticated Software, Radio base stations, Minilink/microwave equipment and Training facilities and other highly complex and challenging projects through its Technical Office (TKS).

BS Field Technician Saudi Arabia

● Work Areas: Responsible for guided corrective maintenance. At replacement of HW at BS by following defined procedures.

Tasks to be performed are ordered via Work Order from NO & MC. Perform corrective and preventive maintenance on several equipment, such as RBS 2202, 2301, (GSM System), Mini-Link E and Microwave radios from different vendors as P-COM, Harris and Nera. Tower climbing might also be part of the tasks

Education and training: Basic technical education and experience from Ericsson GSM radio system, not less than two years. And have the following training courses: GSM System Survey. RBS 200 O&M or RBS 2000 O&M. MMIS User Training. Mini Link E, O&M.

Required knowledge: Minimum 1 year experience of RBS 2202 and OMT. Mini-link E and ITS softwareMSM, (or equivalent). Instruments like Site Master and Terns Pocket. Computing skills as Win 95/98, MSOffice.

Desirable knowledge/skills: Harris Microstar microwave radio family. Nera NL Microwave radios family. NERA.NL tel-link microwave radios family. P-COM Tel-Link Microwave family. Worked previously as a BS field Technician at NO & M project. Other: Cultural awareness. Good knowledge in English. Technical education within Telecommunication. Valid Driving license. Arabic Speaker.

Contact: Marlon Simmer, O&M Regional Manager - Riyadh and Qassim, Ericsson Saudi Arabia - GSME4 Project, Mob: +966 5 443-7825, +966 1 246-4900 ext 1405, marlon.simmer@tks.ericsson.se.
Application: Bo Lorentzon, Recruitment Manager, Ericsson Saudi Arabia - GSME4 Mob: +966 5 443-7874, +966 2 246-4900 ext. 1289, bo.lorentzon@tks.ericsson.se.

MU CARIBBEAN

Market Unit Caribbean is responsable for marketing and deliveries of Ericsson products in the Caribbean Region covering an area of 230,000 squares kilometers and with a population of 27 million people. Activities are carried out from offices in Puerto Rico, Dominican Republic, Jamaica and Curacao.

Manager, Ericsson Local Support

● We are looking for a Manager for our ELS function that provides first line support for our customers in the Caribbean. Currently cellular networks (TDMA or GSM) are in operation in Puerto Rico, Dominican Republic, Jamaica, Curacao, Bonaire and Cayman Islands. The position is

European Career Opportunities within the Business Support Centre (BSC)

BSC the best

The Business Support Centre (BSC) is a dynamic new venture created to add value to Ericsson in Western Europe by allowing the Local Companies to concentrate on their core business. This will be achieved through delivery of high quality, cost-effective, e-enabled IS/IT, F&A and Procurement Services, which will be consistent and standardised across Western Europe.

The BSC stands for customer focus, teamwork, achievement, innovation, flexibility, professionalism and the desire to be first and the best at everything it does. The BSC will focus on increasing the value of back office support to the Market Units, with improved change capabilities and the ability to innovate and react to changes in the market place.

We are looking for motivated individuals who will embrace these values and culture to take the BSC forward in achieving its aims and goals. You will be able to concentrate and develop your core competencies whilst receiving support to achieve your personal goals and aspirations.

Are you a professional in one of the following areas and looking for an exciting Pan-European career?

- **IS/IT**
- **FINANCE & ACCOUNTING**
- **PROCUREMENT**

In particular, we are looking for individuals to work in any Western European location in the following areas:

Strategy and Tools Team Member
Working with the Strategy and Tools Manager, the successful candidates will work within a Pan-European environment to provide strategic sourcing methodologies, tools and training for cross functional and commodity teams within the Procurement community.

Systems and Performance Team Member
This is an excellent Pan-European role working with the Process, Systems and Performance Manager to design, select and implement common procurement processes and tools across the Western Europe Procurement processes and tools across the Western Europe Procurement community.

Please visit our website to view all the career opportunities at: **http://inside.ericsson.se/ma_we_bsc/career_opportunities.html**

ERICSSON

based in San Juan, Puerto Rico but frequent travelling in the Caribbean and to the USA is required. The manager should also provide and coordinate IS/IT services to the offices and staff of Ericsson Caribbean.

The successful candidate should have extensive experience from the system support of Ericsson cellular networks. Management experience is very valuable. Fluency in the English language is required and knowledge of Spanish and French is appreciated. The assignment should start June 1, 2001 with a duration of 2 years.

Contact: Martin Paquette, Manager ELS, +1 787 771 1700 or Arne Palmkvist, Director Operations, +1 787 771 1700.
Application: Noelia Borrego, HR Representative, noelia.borrego@ericsson.com.

ERICSSON TELECOMMUNICATIE B.V., RIJEN, THE NETHERLANDS

Hardware Services regulates the supply of spare parts for Ericsson world-wide. The Service Chain Operating Center (SCOC) in Rijen, which is a part of Hardware Services, is responsible for the management supply chain in the region EMEA (Europe, Middle East and Africa).

World-wide, the 4 SCOC's use OpenUptime (OUP) as the transaction system to support the business in the different regions (EMEA, America's and APAC). In every region, the SCOC is responsible for the implementation and operational support of the OUP system.

The OUP-implementation is based on a template, called the Semi-Configured System (SCS). The SCS is maintained and developed by the OUP Competence Center (OCC) in Dallas. A key-role in the further development and support of OUP within the region has been defined for a regional OUP super-user (SU).

Regional Openuptime Super-User

● The responsibilities include: solve problems within the regional system (OUP and interfaces), install new releases (SCO's) of OUP and run SQL-scripts, support and train local super-users and functional experts, manage problem reports and change requests within the different sites of the region, issue problems and enhancement requests to the global OUP Competence Centre (OCC), identify improvement opportunities from the systems perspective, be the point-of-contact with the local and global IT-organisations, discuss possible solutions and priorities with end-users, other super-users and the OCC, assist in testing and documenting solutions delivered by the OCC, participate in OUP- and (possibly) related projects, develop ad hoc reports/queries with MS-Access, user administration in OUP.

Required competence: an university or HBO level of thinking, acting and working, good general IT-background, knowledge of relational database/SQL, OpenUptime, MS-Access, Windows/NT; some knowledge of IT-maintenance and support, good communication skills in English. The home-base is Rijen.

The Global Customer Service Office (GCSO) within the division Business Line Customer Services has a leading role within Ericsson's Global Customer Support. The GCSO is the single point of contact for Global Operators to raise Customer Service Requests to Ericsson.

The GCSO has 3 Hubs, located in three different time zones (The Netherlands, United States and Australia) which enables continuous 24Hr support to Global Operators therefore, all activities are being executed in an international environment. Our organization is characterized as challenging, dynamic, progressing and provides excellent opportunities for personal development.

● Tasks: We are looking for Customer Services Engineers and Specialists who will be responsible for: managing both internal and external relations from a technical point of view, support of customer networks to ensure optimum functionality of sold services, solving Customer Service Requests (CSRs) reported by the customers, monitoring and follow up of service requests escalated to second and third line support organization, advising Customer Service Managers regarding services, reporting to the customer about delivered services, guiding of both trainee and less experienced colleagues (mentorship).

Required Competence: Knowledge of AXE, 2 to 5 years experience on AXE within Ericsson as a SW troubleshooter, able to work under pressure, attention for detail, teamplayer and good communication skills in English. Homebase is Rijen.

Contact: Marjolein von Reth, Co-ordinator Recruitement & Selection, +31 161 249850.
Application: Marjolein.von.Reth@etm.ericsson.se.

ERICSSON SOFTWARE TECHNOLOGY AB

Ericsson has seen a tremendous growth during the last couple of years when it comes to Pre-Paid systems. Ericsson is by far the market leader, and IN based PrePaid is booming.

PrePaid is today main focus for the operators! During spring 2000, our responsibility was extended to not only PrePaid, but also Charging in total. Our portfolio consists of both GSM based and TDMA based PrePaid systems, Billing Gateway as well as our third generation product called CCN - Charging Control Node, that is the Charging product for UMTS.

Partnering & Sourcing Specialist, Sundbyberg

● We are searching for an ambitious colleague to the Partnering and Sourcing Unit of our product unit Charging Solutions (PU PAY). The unit is responsible for establishing sound business relationships and agreements with world class suppliers of Telecom/Datacom software and systems. In addition to the rapidly expanding PU PAY we are also serving other product units such as PU MCSA, PU SCSA and PU IAPP.

We work according to a proven process in close cooperation with the responsible product management, Ericsson Services and legal functions to assure that all requirements of the Ericsson organization is taken care of in the final agreement.

As a member of the group you will drive your own sourcing projects from start to close, so drive and organizational skills are essential qualities for the job.

You should hold an academic degree and have several years of Ericsson experience preferably from similar work and/or product management, marketing and legal services. You should master very good knowledge of english, both written and verbal is required.

Contact: Bertil Peterson, +46 8 4045831.
Application: job@epk.ericsson.se.

ERICSSON SYSTEMS EXPERTISE LTD, IRELAND

As part of Global SS&I, the Software Centre (SWC) is responsible for GAS Verification and Maintenance for all DMN Product Lines as well as SW Supply & Integration of Product Line AXE. It integrates system products and verifies customer deliveries that can be demonstrated and delivered to public operators by the local Ericsson organization.

AXE is a telecom switching system developed by Ericsson and forms the basis for most fixed network and mobile systems sold by Ericsson. AXE has been supplied to more than 150 countries worldwide and represents approximately 30% of the global telecommunications switching market. We currently have a vacancy in the following position:

AXE System Engineer - Software Specification & Supply

● Our Software Specification & Supply section has responsibility for the specification, parameter setting and program production of market application systems (MAS) and global application systems (GAS). The duties of the section include the design of new MAS's and the updating of existing MAS's with CN-G's for customers in Western Europe and the Middle East and the updating of GAS's and CN-G's. The section is also responsible for some TCM activities. This involves using emulators for reference dump assembly for all types of applications systems.

The tester role involves four key skill areas: AXE Specification, AXE Parameter Setting, AXE Program Production, AXE Dump Building. The ideal candidate should have a good knowledge of the above areas and also good competence in the following tools: SSPToolPhtoolASPTool Plexbase tools DCI Manager APZ Emulators/SEA. The successful candidate will also be required to contribute to training new staff in existing processes and also to be involved in the test of new tools.

We invite applications from personnel internally and externally who believe that they have acquired sufficient expertise in the relevant areas to undertake this task. The position listed may require some foreign travel and cultural awareness. As a screening process based on applications received will take place, it may not be necessary to interview all canditates.

Application latest 010413: Lucy Maher, HR, Ericsson, Beech Hill, Clonskeagh, Dublin 4, Ireland, lucy.maher@eei.ericsson.se, +353 1 207 7467.

ERICSSON SVERIGE AB, NORDIC SERVICE UNIT

Nordic Service Unit wants you!

In January 2000 Finland, Sweden, Denmark and Norway established a common organization for Customer Services, the Nordic Service Unit (NSU). We are approximately 330 employees, and provide the Nordic market with high quality services to Operators.

● NIC is looking for Engineers & Technicians who want to work in Copenhagen, Stockholm, Grimstad or Jorvas. The Nordic Integration Center, NIC, provides integration services for our customers and is operative in Sweden, Norway, Denmark and Finland. Some of the main challenges we see in the future will be to shift our competence into 3G networks (UMTS).

We are building new competence in aim to give faster response towards our customers and are searching for potential, future professionals to join our team. We are looking for persons who like the challenge of providing services in a world that is constantly changing. We expect you to have technical education, initiativeness, speak one Nordic language and have good communication skills in English. We appreciate if you have teamwork and social skills, willingness to develop your competence and customer orientation. If you have test and integration experience it is an advantage. We offer you broad view of products, the possibility to influence your work, international working environment and opportunities to develop your competence.

Contact: Integration Manager Søren Damgaard, +45 33 88 39 94, +45 20 40 39 94.

Datacom IP Technicians for Stockholm

Are you interested in exiting and new technology and want to have customer contact? Then this is the job you are looking for.

We work with installation, configuration, implementation, commissioning, test and customer support in a working environment inspiring with active, dynamic and very competent colleagues. We support Network Management Systems and Datacom IP solutions in the Nordic Countries.

● You will be working in an international and professional environment. As a member of the Nordic Service Unit, travelling and communication in the Nordic region will be a natural part of the job and will provide opportunities of developing international relations and networks.

We expect you have a B.Sc. or equivalent, which makes you able to support technical systems on a high level.

If you have competence within especially UNIX (Solaris and HP-UX or SYBASE, SQL, TCP/IP, IP-network configuration, Internet solutions or telecommunication in general, you will soon be able to do tasks on your own. If you like to help others and work in a highly technical level you can be the person we are looking for. It is crucial for yours and our success that you are committed and feel responsible for the tasks you are doing.

Contact: Country Managers, Mikael Adolfsson, +46 8 520 63088 or Anders Nilsson, +46 8 579 18444.
Positions in Sweden, Norway or Finland, application latest 010315: umtsjob@ese.ericsson.se, Ericsson Sverige AB, Att: Louise Lundqvist, Lindhagensg 80, 126 25 Stockholm. Label it "Integration".
Position in Denmark: latest 010315: L.M. Ericsson A/S, Sluseholmen 8, DK-1790 København V, Att: Søren Damgaard.

ERICSSON SVERIGE AB, STOCKHOLM

GSM, GPRS, UMTS, 2G, 3G, WAP, EDGE, HSCSD...How often have you wondered what's really behind all of these fancy abbreviations?

At the Wireless support unit within Ericsson Sverige AB we work with the systems behind.The support unit is a part of the Nordic service unit, which means that our customers are located in all of the Nordic countries. We provide technical support and software updates to our customers (operators). Also the delivery of software upgrades is one of our main responsibilities. We work very close with the product units in order to gain early competence with new products before they reach the markets.

Trainee Program@Ericsson Sverige AB

● Now we can offer you the opportunity to join a traineeprogram at Ericsson Sverige AB. The program will give you the basics within the Wireless product area that will make it possible for you to take on a position within the support unit. The program consists of both theoretical training as well as on the job training. Some travelling will be required. The length of the program will be approximately 5 to 6 months.

Your background is preferably technical engineer, 3 years university study or similar, and with a genuine interest to play a role in the fast growing mobile area.

Contact: Support Manager Anders Karlsson + 46 8 57918427, Birgitta Detterman + 46 8 579 18436 or Gordana Landén + 46 8 57918122. Application latest 010315, labeled Trainee: Louise.Lundqvist@ese.ericsson.se, Ericsson Sverige AB, Louise Lundqvist, Lindhagensg 80,126 25 Stockholm.

ERICSSON RADIO ACCESS AB, KISTA

Project Manager/Business Developer for Supply

● The post involves running and participating in improvement work/projects regarding the internal business system as well as our component suppliers with special focus on important EMS suppliers.

The work duties consist of planning, implementing and following up on the measurement methods and quality systems with special emphasis on logistics and process assurance, applied by our current and future EMS suppliers. In addition, we want you to ensure that selected suppliers understand our goals and have the ability and capacity to meet them.

The projects can vary in nature and affect our own processes, where the goal should be to clarify and guarantee that goals such as capability, capacity and cost are achieved with the focus on time. The potential to influence/make changes is considerable in this expansive industry, which demands a high level of flexibility. As process assurance/quality work is always an investment for the future, it is of great importance that short-term advances are not allowed to take precedence over the long-term improvement work. In addition, you will be responsible for quality statistics, both internally and externally, as well as reporting on/conducting the professional monitoring of set goals. You will participate as our representative in conjunction with worldwide outsourcing projects as well as develop the business through external/internal benchmarking.

We would like you to have at least technical college education and experience of production environments, purchasing operations and quality monitoring, as well as experience of tools/methods for quality/process assurance. Auditing experience of ISO 9000/14000 or equivalent is valuable for this job, as is knowledge about Ericsson's systems (CAP, C:M, PRIM, GASK, ELIZA, etc.).

You will be technology-oriented and possess good computer skills (Excel, Power Point, Word, etc.). You will have an analytical nature and be able to get to the bottom of problems, i.e. be able to find "the root cause" and present solutions, both at detailed level and in the larger perspective/ context, in other words a "helicopter approach".

As our supplier base is global, you will maintain close contacts with our customers and colleagues in other parts of the world, which is why you must have experience of various international environments and of course be extremely proficient in spoken and written English. You should also be prepared for a fair amount of travelling.

Contact: Björn Fredriksson, +46 8 404 7814, Pia Bolmgren Svensson, HR, +46 8 585341 35. Application: Ericsson Radio Access AB, KI/RSA/HPS Personal, Box 11, SE-164 93 Stockholm, SWEDEN, Jobb@rsa.ericsson.se.

ERICSSON GUATEMALA

Experienced Troubleshooter

● We are looking for an experienced AXE trouble shooter in order to join a young Support Team in

3G situation in Greece/Hellas

Hellas is a small country having about 11 Million in population, one of the most growing countries in EC with a mobile penetration of about 60% and an internet penetration of about 5%. Today there are two GSM 900MHz Operators controlled by Vodafone and Telecom Italia respectively, one GSM 1800MHz Operator where Greek PTT is allied with Telenor, the traditional Greek PTT operating a digital fixed network and four new operators that recently (Dec-00) got Fixed Wireless Access licenses.

The Greek/Hellenic Telecom Market is now fully deregulated and is developing with acceleration towards the 3G systems, services and applications. The 3G Telecom services are to start their deployment earliest at the end of 2001. There are four to five 3G licenses to be awarded together with the extra available GSM spectrum early summer 2001. The Hellenic Government, through its regulation body EETT, declared to start the Consultation / Deliberation process within February-completed within March. On the other hand the auction-which is the most possible process to be used by EETT-will have as an ultimate goal of helping the development of competition on equal terms thus allowing one or two new players to grow healthy and operate in a market with tremendous potential. In turn, EETT believes that End-Users/consumers will benefit with better and more cost efficient services and applications combining mobility, data, voice and video. In addition, the 3G Operators in Greece will not consider Greece as their only market but to its minimum the whole Balkan area needs to be considered as the relations with neighbor countries are very good.

Ericsson Hellas SA (ETG) has identified the importance for Ericsson of continuing being the ultimate supplier even for 3G systems solutions and services. Hence, ETG believes that 3G is one of the most important future businesses that will provide continuity for our healthy businesses in Greece. Therefore, ETG has recognized the need to be equipped with experienced people that have proven international abilities, deep knowledge of Ericsson's global organizations, as well as the company's processes and markets, who will drive the 3G business forward ensuring Ericsson as the main supplier and partner of total communication solutions.

Ericsson Hellas was established in 1979. We are now clearly the largest telecommunications solutions provider in Greece for voice and data communications to the major telecom operators in the country. Most people in Greece are using Ericsson infrastructure for their everyday communication.

Ericsson Hellas, ETG, is located in the beautiful Athens suburb of Glyfada, just minutes away from the sea.

The following position are now open for a 6 month (minimum) duration stay in Ericsson Hellas:

3G TECHNICAL SOLUTIONS MANAGERS

Will team lead the tender effort and will ensure that the tender work adheres to the optimum solution for the particular customer and Ericsson generic offer.
Together with the Bid Manager will definine the solution to be offered, the dimensioning requirements as well as prepare any required BoQs to assist our Sales department in pricing.

This responsibility also includes ensuring that the SoC adheres to the particular customer's needs.

This individual will also be responsible for writing the exclusive proposal that will be included in the relevant offer.

Will also assume the responsibility of coordinating and securing backup from the different Ericsson units that need to be references for the particular tender.

3G CORE NETWORK SOLUTION RESPONSIBLES

Will directly participate in the part of the tender that relates to 3G core network solution including network dimensioning, SoCs and resolution of technical and migration issues and intergration issues.

3G RADIO NETWORK SOLUTION RESPONSIBLES

Will directly participate in the part of the tender that relates to 3G Radio network solution including: Network Planning and Dimensioning, Product Solutions and Roadmaps, radio migration / integration aspects from 2G to 3G, Coverage / Capacity issues, Co-siting aspects of UMTS & GSM, RNC Network Architecture & Interfacing, SoCs and resolution of technical issues for all radio products (RBS, RNC, TRAM, RANOS).

3G TRANSPORT NETWORK SOLUTION RESPONSIBLES

Will directly participate in the part of the tender that relates to 3G solution for the Access and Core Transmission network including: network dimensioning, SoCs and resolution of migration / integration and technical issues such as interconnection aspects of radio nodes to DXX, ATM / FR, PDH / SDH, GPRS nodes, MSC, BSC and IN nodes.

Network management, billing, charging, and provisioning platforms and their evolution

Will participate in the part of the tender that relates to 3G evolution that relates to Network management, billing, charging and provisioning platforms, SoCs and resolution of technical and migration / integration issues as well as interfaces to legacy billing nodes.

SCSA AND PREPAID SOLUTION RESPONSIBILITIES

Will directly participate in the part of the tender that relates to 3G evolution of legacy IN systems and services, Prepaid and incoming interfaces (SIP, CCP, etc...) that allow interworking of the above mentioned systems with the service network, as well as SoCs and resolution of technical and migration/integration issues.

The candidates should have proven experience in previous 3G tender work, as well as be able to work in a team environment under high pressure situations.

Interested participants should forward their resumes for immediate evalution to:

Miss Konstantina Kolovou
e-mail: konstantina.kolovou@etg.ericsson.se

Make yourself heard.

ERICSSON

Guatemala. The candidate must be able to: Analyze and correct software fault by using Test System. Analyze and correct IOG faults (IOG11 and IOG20). Analyze and correct APZ faults (APZ 212 20). Locate Hardware Faults on BYB 202 and BYB 501. Prepare, test and implement correction packages. Test of new features by using adequated procedures.

In addition, the candidate must have the following skills: Team working. Skill to interface with customers. Be organized. Knowledge of spanish language is a plus.

Contact: Rafael Bueno, Local Support Manager, +502 334 72 57 x 253, Mobile: +502 704 68 39, edgrabu@am2.ericsson.se

ERICSSON MOBILE COMMUNICATIONS AB, KISTA

Sub Business Unit Communicators is a new fast growing product unit within Ericsson Mobile Communications.

Our mission is to achieve global leadership in the market of Wireless Information Devices by providing competitive and compelling solutions to corporate organisations and end-users.

Today, SBU Communicatiors, Sales a Marketing team are looking for the right person to come to Sweden for a temporary assignment (one to two years).

Market Analyst

Temporary assignment. Duration: one to two years.

● You will work and be responsible for: analysing the telecom industry trends and establishing regular market forecasts, providing Product Management with input from the market (both competitor analysis and consumer feedback) to further refine our product and solution offering, initiating and managing market surveys together with external agencies, influencing and analysing customer satisfaction programs, participating in the Ericsson analyst and research networks, ad-hoc analysis.

We believe that You have a university degree and at least 2 years work experience preferably with business intelligence/market analysis or with similar tasks. Preferably some experience from the telecom industry and an interest in the telecommunication and internet industry.

You are an enthusiastic, thorough and self-motivated person with analytical skills. Have the ability to take own initiatives and communicate fluently in English (written and spoken). The position will be situated in Kista, Stockholm in Sweden.

Contact: Helene Hedin, +46 8 585 344 63, Ericsson Mobile Communications AB, KI/ECS/HK, 164 80 Kista, Sweden.

COMPAÑIA ERICSSON - ARGENTINA

Ericsson Argentina has decided to start up an ND/NPI Service Delivery unit in Buenos Aires to primarily support the Argentinean market. This in order to supply our customers with complete network solutions and high-level consulting services.

The offered position will present a great challenge to develop business and support the technological shift of the operators in Argentina.

Business Developer Customer Services

● Will be Responsible for designing service proposals to meet specific needs of our customers in the Network Support area. He will actively participate in developing the services portfolio and will give recommendations about pricing and new services design.

We are looking for a candidate with at least three years experience in support of Ericsson solutions. He should have an university degree in Telecommunications, must be fluent in English language and must have a strong business orientation and customer-focus. Fluency in Spanish language is also highly desirable.

Location & Duration: Long term expatiate contract in Buenos Aires, Argentina.Information about Argentina and Buenos Aires: http://www.cityofbuenosaires.com/data/en/default.asp, http://www.lonelyplanet.com/destinations/south_america/argentina/, http://www.mercotour.com/welcomei.html.

Contact: Maria Eugenia Pistacchia, HR Ericsson Argentina (CEA), (+ 54 11) 4319 5500.

NIPPON ERICSSON K.K. (JAPAN)

Japan has today the world's highest penetration of mobile Internet with almost 30 million subscribers accessing advanced services including Internet over their mobile phone.

Our customer J-Phone Group has over 9.5 million subscribers with good growth in market share. J-Phone Group will launch 3G service in October 2001. KAM J-Phone Group Marketing is responsible to drive new business and to secure commercial success of new products, through business development and tough negotiations.

Senior Manager IMT2000 Marketing Japan

● We are now looking for Senior Manager IMT2000, who will drive our business, coach and work with local staff to transfer competence, and work closely with product management, our regional offices and BU/PU. Main tasks are to create, market and sell mobile solutions through good customer relations, but also marketing activities, offering and contract negotiations.

Initiative, business-orientation with strong perseverance and drive, planning and leadership are relevant key-words. Excellent customer orientation and a good understanding of the telecommunications market place is required, with knowledge of Ericsson's products, solutions and services. Candidates should have a university degree or similar with good experience system sales including pricing and negotiations.

You are able to express yourself in English. Experience with Japanese culture and society is a big advantage.

Contact/Application: Kent Asai, +81 3 3830 2280, +81 90 3913 4965, kent.asai@nrj.ericsson.se or Fredrik Johannesson +81 3 3830 2390, Fredrik.johannesson@nrj.ericsson.se.

ERICSSON HONG KONG

Hong Kong is recognised as one of the most competitive Telecoms Market in the World. Six Mobile Operators running eleven networks serve nearly four million customers with subscriber penetration at over 50 %.

Ericsson Local Support in Hong Kong provides support services to our key Mobile operator's GSM900/1800 and TDMA networks as well as the major Wireline operator's large international gateways. Four 3G licences will be awarded during 2001.

Hong Kong operators need to be at the forefront of technology -we have already introduced WAP and GPRS into the market and will be among the first in the Asia-Pacific Region to implement 3G networks.

To provide professional support in this very challenging environment, we are looking for a person of high calibre to fill the following position:

System Expert

● As System Expert, you will be required to perform network investigations and problems at the highest technical level and to resolve them in line with customer expectations. Design, test and implementation of Market functions will be required as well as participation in system updates/upgrades and our 24x7 Emergency support rota.

You will also be expected to provide technical competence transfer and mentoring to the existing support team plus technical advice to the Ericsson Local Support Manager to whom you shall report directly.

In addition, you should expect to be exposed to the emerging 3G technologies and help manage the required adaptation of the support teams processes and methods accordingly.

To fulfill the above job responsibilities and expectations, you should have broad CME20 based system knowledge, expertise in the area of APZ/IO and ideally some exposure to GPRS and Datacom.You should also have been working with AXE systems for at least 8 years, 5 of which should have been with Mobile systems, in a Design/Verification/Support type environment.

Besides, you should have a full understanding of Ericsson support processes and experience of working directly with customers - a strong focus on customer relations and satisfaction is expected. Hong Kong is a fascinating city in which to work and live - for a technological challenge and an exciting way of life you can do no better !

Contact: Vian Luk, Human Resources Officer, +852 2590 2419, vian.luk@ehk.ericsson.se.

ASO AMERICAS, DALLAS

The ASO Americas is located in Richardson (Dallas), Texas. In the product area of packet switching systems we are seeking engineers at all levels.

The exploding opportunities and growing GSM/GPRS business in North and Latin America require us to expand our current operations in the region.

GPRS Support Engineers

● The main responsibility of this role is to deliver GSN/GPRS network level support to all market units in the Americas region. You may also be required to work on projects including FOA, Interoperability with external vendors, SW supply and verification.

Experience in one or more of the following areas is required: GPRS, GSM Networks and nodes, Datacom products and protocols. Skills such as UNIX, Erlang, C, Clearcase are a plus. Working knowledge of Ericsson support processes and tools is desired.

Contact: Enda Flood, Unit Mgr. +1 972 583 5393, Enda.Flood@ericsson.com or Victor Sandoval, Support Mgr.+1 972 583 6789, Victor.Sandoval@ericsson.com.

ERICSSON INC, US – ASO DALLAS

The ASO Americas has an open position in the Build Management – Resource System Management group.

Build Management: We provide a high level of support to the ASO Americas Verification organizations via Test Configuration Management, Product Line Maintenance and System Test Plant engineering, installation and maintenance, i.e. Resource System Management.

Resource System Management: We are responsible for all engineering, installation and maintenance of the CME20, CMS40 and CMS88 strings as well as AXD, Tigris, servers and other test equipment.

You will be joining an enthusiastic and competent team in a dynamic working environment. Our office is located just north of Dallas in Richardson, also known as the 'Telecom Corridor'. The 'Telecom Corridor' is quite an exiting place with great atmosphere where all the big telecom and datacom competitors are present.

To live here, in this sunny and warm climate, with friendly people, cool nightlife, all the big sports teams to watch (Cowboys, Stars,…), vast variety of restaurants, never ending golfing season, great outdoors and the affordable living, which makes life here in "Big D" very enjoyable. The Dallas metroplex is one of the fastest growing in the US. The northern suburbs boast some of the best schools in the nation.

STP Installation Engineer

● JOB DESCRIPTION: This person will work closely with the Senior STP Engineer in coordinating installations/de-installation of lab equipment for the ASO Americas Software Supply/Support and Integration Center.

You will direct all sub-contractors for all installation activities. Other duties will include electrical loading, balancing, punch downs, cross connects, rack construction/installation, Internet connectivity, and scheduling installations.

We are looking for someone with knowledge of AXE, AXD, servers, cabling, networks, etc. Experience working with contractors as well as good communication and good service skills.

QUALIFICATIONS/EXPERIENCE: Associates degree in relevant discipline, or equivalent experience (5 to 10 years) with the installation process, as well as an electrical and mechanical background. Must be able to handle and prioritize multiple projects and work in a high-pressure environment. Must have good written, oral and organization skills and be able to lift up to 50 lbs.

Contact: Jerry Schellenberger, Group Manager: ASO Americas - Build Management, Resource System Management, Jerry.Schellenberger@ericsson.com, +1 972-583-5675 or Randy Morast, Group Manager: ASO Americas - Build Management, Randy.Morast@ericsson.com, +1 972-583-7534

ERICSSON INC, USA

Take hold of the opportunities available in Ericsson largest market, North America.

Our First Line Support Unit is looking for Engineers with solid AXE experience but with a keen interest in expanding their portfolio of experience with the new and emerging products Ericsson is driving into the world marketplace. Our organization currently supports 17 different product lines and is continuing to expand as Ericsson introduces new products into the North American market.

Global Services - 1st Line Support

● As part of this first line team you will start by using your core AXE knowledge to support existing Wireline (PSTN) Local and Global customers while at the same time going through training programs and development to allow you to support several different products lines.

These product areas include but are not limited to CDMA, Datacom, Access, Jambala, Engine, IPT, etc...

Throughout this journey you will have the opportunity to pursue development in technology areas that interest you.

This is an excellent opportunity to capitalize on the experience you possess with existing AXE products while developing and applying competence in several new technology areas.

Education/Experience: BSEE/EET or equivalent work experience. Minimum 3-5 years experience within Ericsson support. Solid knowledge of AXE platforms. Working knowledge of Test System, Plex, ASA as well as standard Ericsson Support tools such as GS3 and MHS. APZ and/or IN experience a valuable asset. Extensive experiencing in trouble-shooting and customer handling.

Key Skills: Solid customer focus and excellent customer skills are a must. Ability to work well as a team player but also to have self initiative and motivation to work independently. Excellent interpersonal skills in daily work as well as under pressure. Excellent verbal and written communications skills.

Willingness and adaptability to evolve and acquire new product competence in several different new technology areas.

Contact: Tim Danks - Manager, 1st Line Support A, tim.danks@ericsson.com, +1 972 583 0800, ecn 80030800 or Asad Rizvi - Manager, 1st Line Support B, asad.rizvi@ericsson.com, +1 972 583 0251, ecn 80030251.

ERICSSON WIRELESS COMMUNICATIONS INC., SAN DIEGO, CA, USA

Do you want to work with CDMA Systems, the latest addition to Ericsson's 3G product portfolio, in San Diego, California - USA?

We are a high growth business unit with over 1200 employees. San Diego offers some of the best weather and quality of life in the U.S.

Strategic Product Manager, cdma2000 O&M Tool

● We are a team of product managers in the BU CDMA (BMOC) handling the Operation & Maintenance products and features of the evolving CDMA product line.

DUTIES AND RESPONSIBILITIES: You would be responsible for the total life-cycle of our new toolkit for cdma2000 Radio network design and optimization (CREATE). The package comprises functions for the radio network planning, transport network planning, drive testing and optimization.

The products are partly developed at EWU, other Ericsson units or sourced from 3rd party vendors. Your task will be to understand customer demands, definition and prioritization of requirements, vendor selection and negotiation, business cases, pricing and marketing of the CREATE products.

The ideal candidate will have: Experience with radio network planning and optimization tools (e.g. TEMS, TRAM) Product or system management experience. CDMA/WCDMA knowledge is a plus not a must. Excellent analytical and technical understanding to direct R&D units and vendors. Business understanding of the mobile network marketplace. Excellent communication and writing skills. Proactive attitute, customer orientation, team player.

The position is available immediately. A local contract is preferred, GCE can be considered.

Contact: Stefan Spaar, Director Product Management CDMA O&M, +1-858-332-6409, stefan.spaar@ericsson.com, cdmasystems.ericsson.se.
Application: Gary Tennison, Recruiter, +1-858-332-6240, g.tennison@ericsson.com, pls. refer to req# 7104.

ERICSSON WIRELESS COMMUNICATION, CALIFORNIA, USA

Configuration Manager

● We need an expert to support our efforts in Configuration Management for the CDMA Radio Access Network (C-RAN) product. Responsibilities will include the development and management of product and document structure and the formulation of methodology for the control of project and product baselines in a multi-project, incremental development environment.

This position demands the ability to work well as a member of a cross-functional team. It requires excellent leadership, communications, and decision-making skills. Significant Ericsson experience in Configuration Management is highly desired. Experience with managing the System Engineering aspects of complex communication systems is essential. Experience with CDMA wireless infrastructure is preferred.

Senior Project Manager

● We need a Senior Project Manager to help us manage the System Engineering efforts for the development of a next generation CDMA Radio Access Network (C-RAN)infrastructure product.

You will develop and manage schedules and budgets as well as coordinate needs with other project stakeholders. You will also manage risks and provide status reports to management while driving the System Engineering effort through completion of the project.This position demands the ability to work well as a member of a cross-functional team. It requiresexcellent leadership, communications, and decision-making skills. The ability to estimate effortsand risks based or partial information is important. Some travel may be necessary.

Contact: sdhr@ericsson.com and include your CV.

NANJING ERICSSON COMMUNICATION CO. LTD.

System Expert for SW Supply

● OBJECTIVE OF THE JOB: To support the SW supply activities run by ENC/R. To secure the quality and efficiency of the SW supply work. To train / coach the local ENC/R engineers.

RESPONSIBILITIES and TASKS: support (incl. trouble shooting) the SW supply team of ENC/R to do the SW supply work, which includes: GSM AC-A verification, FOA on site. GSM CN-A ASV (Application System Verification), feature test, function test, and FOA on site. Coach and train ENC's experienced engineers to grow up as local system expert to support the SW supply work in the future.

AUTHORITY: Making work instructions, procedures, defining work process for the SW supply work.

REQUIREMENTS FOR THE JOB: more than 5 years experience of working on AXE systems, very good competence on Plex-C and ASA, being able to write EC, good experiencee on GSM system is preferable, ASV experience is preferable.

Contact: Candice Wang, Candice.Wang@enc.ericsson.se.

ERICSSON SDN. BHD., MALAYSIA

Manager, Service Marketing

● STRATEGIC ROLE: Identify, develop, and drive Global Services business, focused on Telecom Management, for telecom operators. Work as a high level consultant for key business – part time.

Duties and Responsibilities: Devise and implement a strategic business plan – in cooperation with Key Accounts. 25% of the time should be billable consulting hours. Overseeing a shadow P & L, which requires strong influential skills and a strategic value proposition both internally and to the customers. Play a key role in sales activities, including the qualification of each project and bid approval. Develop and maintain strong relationships with alliances and partners. Develop a clear sales strategy including the identification of key differentiators and added value offerings. Develop and maintain strong relationships at senior levels within client organizations and industry in line with MU/KAM strategy. Ensure synergies with other units of Ericsson Malaysia (e.g., GSRO) are fully utilized. Lead and motivate staff to ensure that morale is kept at a constant high level.

Key Competencies: A recognized university degree with 2-3 years experience in consulting/ sales of system integration projects and/or 3-4 years of experience in the IT/Telecommunications industry, e.g., customer care and billing, and telecom/network management solutions. Able to work with contracts and offers, and have extensive knowledge of system integration projects telecom operators or utilities. Preferably this experience should come from Ericsson, a large IT company, systems integration firm or telecom operator. Must be fluent in English.

Profile: Must posses the competencies of a Business Manager, i.e., customer orientated, accountable, market focused and business orientated. Sales driven, goal oriented and have a good commercial judgement. Determination to achieve the service sales budget. Possess good presentation and negotiation skills. Ericsson knowledge and good service portfolio skills are preferable. Self-confident and creative mindset.

Contact: Ericsson Sdn. Bhd, Human Resource Management Unit, Wisma Ericsson, Block D, 12th Floor, Jalan SS7/19, Kelana Jaya, Petaling Jaya Selangor Darul Ehsan, Malaysia.

ERICSSON GMBH, DUSSELDORF, GERMANY

We are looking for support engineers with a minimum of 3 years AXE/GSM experience, specialized in the Core Network Mobile area, CSS/ MGW/ Core part of UMTS. You will be working with a young international team in the section Core Network Mobile. The section belongs to the unit Customer Support Services, Ericsson Services Mid Europe.

UMTS/GSM Support Engineer

● You will be responsible for support and supply activities for the core network part of GSM, UMTS and GSM on the Net. This involves customer acceptance tests, UMTS field trails, FOA, TR analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development. Our customers in Germany are one of the strongest players in the Telecommunication business. Therefor it is one of your biggest efforts to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we have a very close contact to the development projects within Ericsson. This will give the successful candidate a great opportunity for personal and technical development and work with the latest GSM/UMTS technique. We also have our own training center in Düsseldorf.You should have a good knowledge of support/supply activities. You will play an active role in support of the existing network and testing of future releases. The position can be either expatriate or local employment.

Contact: Mikael Strandberg, +49 211 5342359, Mikael.Strandberg@edd.ericsson.se.

ERICSSON EUROLAB NETHERLANDS B.V.

Integration & Verification Engineer

● Responsibilities: Set up network configuration in order to perform tests. Design and develop test plans for customer oriented verification and execute tests. Document test results. Solve problems in software or network configuration. Register specific problems in Trouble Reports. Demonstrate to the customer in so called First Office Application. Required competence. Unix knowledge. Experience in making verification test plans and executing tests. Ability to work in a dynamic, high pace environment. Affinity with teamwork.

Preferred knowledge is: Design experience IN-services or platform. Experience in making test plans and performing test.

Contact. K. Kruize, Competence Mgr. (I&V), Appl. Solution Centre, Ericsson Eurolab Netherlands B.V.P.O. Box 8, 5120 AA Rijen, The Netherlands, +31 161 249577, Fax +31 161 247089, Mobile +31 6 204 26579, Karin.Kruize@eln.ericsson.se.

PRODUCT MANAGERS FOR BUSINESS COMMUNICATIONS IN IRELAND

The Business Communications Solution Center (BCSC) is responsible for delivering network-based business communication solutions that can be deployed over fixed, mobile or IP access. Off-switch applications, both internal and third party, voice and multimedia also form part of the BCSC portfolio. Interworking with other networks, such as IN and PBX is a key feature of the BCSC offering. Our product is attractive to fixed and mobile operators, both 2G and 3G, as well as the emerging ASP market. The key benefit to the end-user is the ability to have a virtual office environment, regardless of their location.

We have vacancies for a number of Product Managers due to increased product responsibility. As Product Manager, you will be responsible for the lifecycle of one or more product lines. This responsibility includes:

Defining product releases based on customer and market demands.
Budgetary responsibility, within which the main goal will be to define products to realize significant sales potential.
Key responsibility for writing assignments towards BCSC's design organizations and to act as sponsor for one or more projects.
Providing support to the BCSC sales team in customer meetings and sales presentations.
Cultivating relationships within the Ericsson organization as our products are released in conjunction with Core Networks and Multi Service Networks.

BCSC has immediate vacancies for Product Managers within the following areas:

3G Business Comm. services.
BCSC has a market leading 2G product - GSM Mobile Centrex (GMC), and is currently in start-up phase for our 3G offering. This will involve close contact with UMTS and J-VPN product development. For this position UMTS or GSM experience is essential.

IT-based applications.
BCSC will be forming partnerships in areas such as IVR, Unified Messaging and Call Centre. This position entails defining the technical requirements for these partners and also driving the technical relationships.

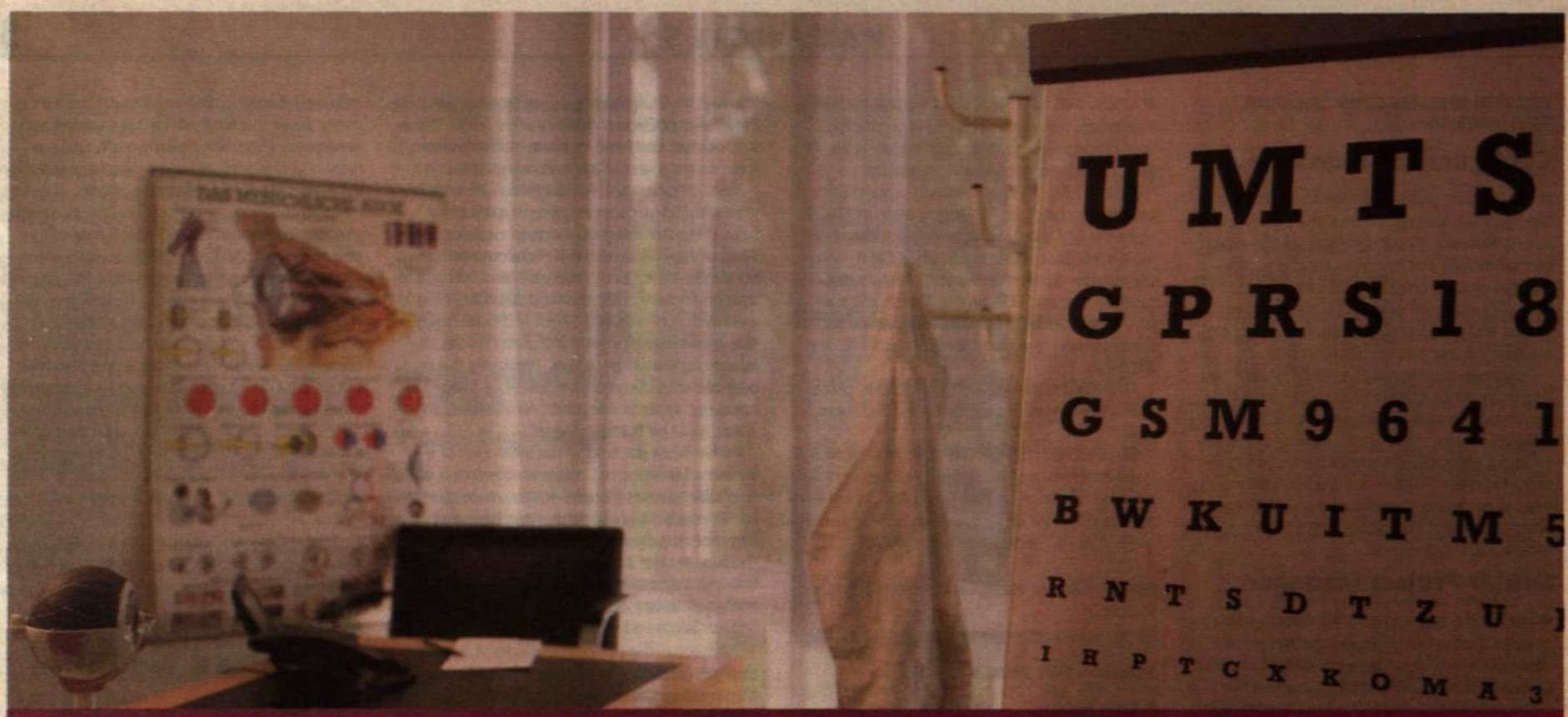
Operation of Hosting Center.
BCSC offers an integrated solution for ASPs. This position entails putting requirements on the applications that support the operation and maintenance of these integrated Hosting Centres, e.g. network surveillance. A successful candidate should have O&M experience in either a Hosting Center or an Operation and Maintenance Center (OMC).

Core BGC services.
Such services form the core of BCSC's total business and are offered from Local /Translocal and ATM platforms. Current priorities include interworking with J-VPN and availability over broadband access types, such as DSL. The suitable candidate will have AXE, DSL or IP experience and must be ready to apply this knowledge in a new role.

All positions demand a high level of relevant technical experience arising from a design or testing background (UMTS, GSM, VPN, AXE, IT applications and networking). Previous product management experience, though an advantage is not essential. Successful candidates must be able to demonstrate product discipline in gathering and validating requirements and converting these requirements into development assignments for BCSC's design organisations. A suitable applicant will enjoy working in a dynamic team environment, possess good inter-personal skills and be able to communicate effectively at many levels both internally and with customers.

If you understand the dynamics of business communications and feel your input can shape products and services which improve how business people will communicate, then we would like to talk to you. Please send your Curriculum Vitae to

Lorna Mulvihill
Human Resources Manager, Ericsson Systems Expertise
Radio House, Beech Hill, Clonskeagh, Dublin 4, Ireland Or email to Lorna.Mulvihill@eei.ericsson.se



Ericsson in Germany – We see Mobile Internet. What about you?

The Ericsson GmbH (EDD) is headquartered in the international town Düsseldorf / Germany and has about 1.000 employees. With UMTS the Internet becomes Mobil Internet. The world will change and we are pushing these changes. Therefore we need people who think and react unconventional as we do. People who are able to see more.

We offer you exciting opportunities in a variety of fields, a new and challenging business for Ericsson. All positions require a strong customer focus and the successful candidates should be able to work well within a team environment. English fluency is essential and a good knowledge of German desirable.

For further details or to apply for a position above please contact:

Ericsson GmbH
Recruitment Service
Fritz-Vomfelde-Straße 26
D-40547 Düsseldorf
eMail: career@ericsson.de

Professional Controller

The operational supervision of the Customer Unit is at the center of your responsibilities. This includes supporting the account organization regarding financing, strategic accounting and forecasts, as well as dealing with general customer and profit focused analyses. Furthermore, you will be actively involved in designing the Customer Unit's logistical processes, and you will represent the connection to the Financial Controlling department.

You posses a degree in business administration and have had at last 3 years experience in the controlling field, preferably in an international enterprise. Your most prominent characteristics are team spirit, assertiveness, great capabilities for communication and flexibility. Should you also happen to be a "people person", have knowledge of current PC applications (i.e. MS-Office, SAP R/3) and be capable of conducting your daily business in English, you will be ideal for this position, which we are hoping to fill as soon as possible.

Global Account Management and Director Global Account Management Vodafone Europe

In this varied position you will be responsible for all sales and marketing activities in order to build and extend relations in the Vodafone Europe organization to expand and support our business with companies of the Vodafone Group. This includes the maintenance and development of existing customer relations. In co-operation with the technical departments, you will realize customer requirements in business options on a solution-orientated basis.

The ideal candidate will enjoy working in a young international team and has a degree in a either technical or commercial discipline (university, college) or comparable relevant professional experience. A basic knowledge of GSM would be useful. You are a self-driven extrovert result and relation oriented person. Service-orientation, communication skills and creativity and a systematic working attitude are one of your strength.

The major task of the Director Global Account Management will be to lead a group of Account Managers and Business Development Managers in this area. Therefore you have to be a sales-oriented individual, enthusiastic and self-motivated, with the maturity to establish credibility with our customers and build the foundation for a successful relationship. Team-orientation and excellent leadership qualities are essential.

Solution Marketing Manager – Internet Applications

We are looking for persons wanting to play an important role in making Ericsson the market leader in Mobile Internet. Specifictly we are looking for candidates in the area of Unified Messaging, Mobile Portals, IN Applications, E-commerce and Games & Entertainment.

As a solution manager you would be responsible for the product strategy as well as making sure that the strategy is carried through. Included in the job is performance of market- and competitor analyses, finding, developing and supporting the right sales channels. Strategic product marketing belongs to your tasks as well as product introductions and partner relations.

You will be the interface toward sales force, design units, technical support, consultancy and integration units.

We expect you to think independently, to possess a high degree of flexibility and a desire to work within the rules of the New Economy. Product management experience from the Enterprise sector could be an advantage as well as web architecture.

Customer Solutions Manager - Mobile Internet

One of the most dynamic markets in Europe is moving rapidly towards realizing the Mobile Internet, by means of GPRS, WAP and an ever increasing focus on mass market applications and new revenue streams from portals, e-commerce and advertising.

Do you want to take on a senior role in grasping this opportunity and help making our key account Vodaphone D2 – Mobile operator as well as ISPs – the most successful Mobile Internet player?

We are looking for a dynamic and driving person with a good feeling for the new market place and the Ericsson portfolio of Mobile Internet and Internet Applications. The ideal candidate has a good mixture of Technical and Business competence through education and practical experience.

Customer Solution Manager – Access

The main responsibility is working for our GSM / UMTS Radio Network Solution towards the Vodaphone D2 Group. This includes the definition of solutions meeting customer requirements and to conduct technical presentations. You will be the interface with the customer in issues related and to assume the performance of workshops with the customer.

Applicants will be qualified at degree level and will have built up sufficient technical and business experience to allow them to function independently at a professional level for all activities. The nature of the role is very dynamic, therefore will require pro-active individuals with good problem solving and decision-making skills. Demonstration of communication skills is important as is strong customer and efficiency awareness.

Customer Solution Manager - UMTS terminals

Do you want to take a senior role in strengthening our efforts in bringing UMTS multimedia client solutions to our key account Vodafone D2?

The availability of high-speed data networks, as well as the packet data structure offered by GPRS and W-CDMA, will be a massive leap forward from what is possible over today's mobile networks. To take advantage of these data speeds, users will need a new class of handset, which will be capable of displaying multimedia and other sophisticated content via 3G-based networks.

In this position you will have an important role in making our UMTS project a success and to establish successful business in integrated multimedia solutions. You will be responsible all from the first early trials to paving the way for introducing new and more advanced feature phones and multimedia terminals.

We are looking for a dynamic and driving person, with a good feeling for the mobile internet and consumer market. You have excellent communication skills, work flexibly in a team and have a strong committment.

Project Manager

This challenging position involves project management in realization of innovative infrastructure and application solutions for our customers in the segment of network operators and service providers. You will be involved in tender teams, feasibility studies, selection of resources / sub-contractors, contract formulation, set-up of project teams, preparation of project plans and the observance of project milestones and quality assurance.

For this position, the ideal candidate has a degree preferably in electrical engineering and several years experience as a manager of technical projects. You have a strong business focus and are familiar with project management methods and tools. We are looking for a highly motivated and team-orientated candidate who is a good communicator and builds trust in customer relation. You are flexible in finding solutions, see opportunities first and then the limitations. In addition to a good working knowledge of MS-Office applications is a requirement.

Engineers – UMTS Test & Integration

This challenging job position in the field of the latest mobile communication technology includes a wide variety of tasks, like test, support and integration of new network-elements in 3G mobile and data networks. You are a very important interface towards Project Management, the responsible Market Unit and of course to all customer representatives in Germany. You are responsible for field acceptance tests with the customers, performing trouble report handling and solving HW-, SW- and Configurations-problems. You will be the active interface for the back-office and implement (roll out) new HW- and SW-products.

As a suitable candidate you have experience in the area of GSM and telecommunication. You will be trained in the area of UMTS System Technology by attending courses and On-the-Job training in our young and highly motivated team.

UMTS Radio Network Design Engineers

The WCDMA Competence Center at EDD takes central responsibility in the area of third generation mobile telephony systems based on the new UMTS standard. Therefore we are looking for qualified Radio Network Design Engineers in the area of UMTS/WCDMA. You will be part of our new UMTS Radio Network Design organisation which is developing network solutions for our German customers. The position contains the following activities as complete cellplanning of WCDMA Systems, developing methods for WCDMA Radio Network Planning, tuning and optimisation and support of internal and external customers.

As a suitable candidate you have experience in the area of GSM, TDMA and/or IS-95 cell planning. Additionally you need solid knowledge in Unix and telecommunication. You are flexible, a team player, open-minded and self motivated. You will be trained in the area of UMTS System Technology and Cell Planning by attending courses and On-the-Job training.

Engineers - Network Configuration

The network configuration engineer will compile and develop all required data for switching networks (e.g. A- and B-number-analysis, routing analysis, charging-/accounting and signalling data). You will also configurate new features and services (AOC, IN functionality and features) and work Ericsson internally and at the customer. Further tasks will be preparation of configuration data for hardware expansions and new systems (mobile and fixed networks). Programming of data transcript support system tools and preparation of technical documentation for our customers and service partners are also part of the job.

On top of the above mentioned requirements a suitable candidate should have a good understanding of structures, procedure and functionality of existing telecom nets.

Engineers - System Test Plant (STP) support and Test Configuration Management (TCM)

You will be responsible for the configuration and updates of our System Test Plants (STP's). The STP's are used for various projects like Type Acceptance, trouble shooting, test of 3rd party products, or customer demonstrations of new products. As each project requires an individual test configuration, you will cooperate closely with our Project Managers to meet these needs. Other tasks are planning and supervision of STP extentions (e.g. for UMTS), provisioning of test tools like protocol analysers, and trouble shooting of all STP equipment. You will work with a large variety of equipment, like GSM systems, UMTS, wireline AXE's, IP products like AXD and AXI, Access products, and Test Automation Systems.

The job requires a university degree in Electrical Engineering or Computer Science. You should be interested in both Hardware and Software. Therefore, an apprenticeship as a telecommunication installer or similar is of advantage. Experience in GSM or AXE is also a plus. Depending on your experience, you will do various training courses, as well as a training-on-the-job program.

Engineers – Core Network Mobile

As a Support and Supply Engineer you will work with Network nodes for UMTS and GSM, e.g. the Media Gateway (AXE or Cello) and the MSC Server. The wide variety of tasks includes the market verification of the new nodes, testing of the latest Software Version and supporting our customer, who is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network as one of the first markets worldwide. Working in the team of the Master Back Office and handling trouble reports is only a brief description of this challenging field of supporting. You will work very closely with the development projects.

As a suitable candidate you have experience in working with Mobile Core products (MSC or UMTS). You are flexible, a team player, open-minded and self motivated. The successful candidate will get a great opportunity for personal and technical development and work with the latest GSM/UMTS technique.

GSM Support Engineer

Support Engineers, who would like to develop their career in the BSS area are of our interest.

You will be responsible for support and supply activities for the radio part of GSM, IP BSS and GSM on the Net. This involves customer acceptance tests, field trails, the first field application, Trouble Report analysis, help desk handling, first and second line emergency support, advanced trouble shooting and emergency correction development. You will be working with a young and international team in the section 'Radio Access Services'.

Our customer in Germany is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we enjoy a very close contact to the development projects within Ericsson. This will give the successful candidate a great opportunity for personal and technical development and to work with the latest GSM technique. We also have our own training center in Düsseldorf.

You should have interest in support/supply activities and working in close contact with our customers. As a team player you will have an active role in support of the existing network and testing of future releases.

Operational Product Managers (OPM) UMTS / GSM / GSM on the Net

We are looking for four Operational Product Managers who would like to specialize in the area of Core Network UMTS / GSM or Radio Access Services / UTRAN or GSM on the Net. You will be working with a young and international team in one of the sections 'Core Network Mobile' or 'Radio Access Services'.

As Operative Product Manager you will be market responsible for products within your area from a technical point of view, for the whole lifecycle of the product. You will handle Product/Project support, technical requests for products out in the field which were receceived from the customer and internal sources, parameter handling of the system, technical interface between the customer and the PU, support of sales activities, handling of product quality issues, handling of customer documentation.

Our customer in Germany is one of the leading operators in the Telecommunication business. Therefore one of your main tasks will be to introduce new releases and products into the live network, as one of the first markets worldwide. For this reason, we have very close contact to the development projects within Ericsson. This will give the successful candidates a great opportunity for personal and technical development and to work with the latest UMTS / GSM technique. We also have our own training center in Düsseldorf.

You should have an interest in support/supply activities and working in close contact with our customers. As a team member you will play an active role in supporting the existing network and testing of future releases.

ERICSSON

Be part of our success – in Ericsson Austria, Vienna

Would you like to work at a place that is famous for its culture and the beauty of its scenery, situated in the heart of Europe and offering a high quality of living - all this within Ericsson?

Ericsson Austria offers you challenging tasks and carrer opportunities.

Take your chance in our international departments in Enterprise Business and in strengthening our association for mobile and fixed networks!

Head of Customer Solutions Management.

In this function you will be responsible for a team of customer solution managers, while acting as the customer's preferred partner for discussing, creating and describing technical customer solutions. You will transfer customer requirements into products and solutions in close cooperation with business and product units.

We expect you to have a good knowledge of Multi Service Network Solutions for network operators as well as a technical background and education within datacom/telecom. In addition you have excellent management and teamworking skills and are a commercial thinking and customer oriented person.

Head of Customer Services and Operations.

As Head of Customer Services and Operations you will secure competence development for all Key Account Managers, Account Managers and Solution Managers within divisions, monitor and secure customer satisfaction and act as a competent speaking partner for all services offered by Ericsson.

As our ideal candidate you will have experience in customer projects towards telecom operators, a strong sales orientation as well as good management skills. You should be highly customer oriented and a commercial thinking person.

Customer Services and Operations Managers.

As the speaking partner for our customers you will be responsible for offering all customer services while securing forecasting and deliveries of all services as well as monitoring and securing customer satisfaction.

Successful candidates will have relevant professional experience, enjoy teamwork and are customer oriented, commercial thinking personalities.

Section Manager Telecom Management/ Professional Services.

In this position you will be fully responsible for securing resources for service supply activities according to forecasts, contractual obligations or customer requests as well as sales support activities (service definition, cost calculation, tender preparation, customer presentation) within your section. The main focus of services offered within your section is network management for wireline/UMTS networks and radio network design for UMTS.

We are looking for enthusiastic and people oriented managers and colleagues with a technical degree and a minimum of 10 years experience in telecommunication. Fluency in English is preliminary whereas German will be an advantage.

Solution/Service Specialist for Datacom/IT Applications.

In this position you will be responsible for creating and describing customer technical solutions in close cooperation with the customer's technical staff as well as for the product introduction, localization, verification and presentation. You will be participating in subcontractor negotiations and provide advice and assistance to the sales and service organization.

As our ideal candidate you have a deep technical background in the IT/Data world as well as experience with Ericsson PBXs (MD110 and BusinessPhone) and SW Applications. Technical support knowledge, high team orientation as well as customer orientation is essential. Fluency in German is a pre-requisite.

Product Marketing Manager.

In this function you will value product requirements and analyze product's profitability while securing successful marketing activities for these products within our distribution channels.

Besides a technical or commercial university degree you have a strong background in the area of telecom (PBX, system and network management) and datacom (LAN, WAN, TCP/IP). In addition you are initiative, highly team-oriented and responsible.

Technical Product Manager.

As a Technical Product Manager you will consult and support our Product Marketing Managers in planning product development and introductions. You will prepare technical specification documents as well as prepare and implement product presentations and demonstrations for partners and customers.

Successful candidates will have a technical university degree and professional experience in telecom (PBX, system and network management) and datacom (LAN, WAN, TCP/IP). Excellent communication and English skills are preliminary.

Customer Documentation Manager.

Your main responsibilities will be the issuing of online documentation and operating instructions for our communication systems as well as SW (PC) applications. In addition you will initiate and lead projects for localizing products and documentations and prepare online help for SW applications.

You have a technical education or practical experience in preparing technical documentations (online media). Excellent English and PC skills are similarly prerequisites as team-orientation, responsibility and initiative.

Product Training Designer.

As a Product Training Designer you will be responsible for creating and developing trainings while preparing training tools and implementing pilot trainings and "Train-the-Trainer" courses including documentation and certification.

Excellent communication skills as well as training experience are as important as a technical education and telecom experience. We expect a candidate with excellent presentation techniques and English skills as well as high team orientation and willingness to travel.

Software and Hardware Developer.

You take ownership of system and product analysis as well as of the specification, design, encoding and testing of functional modules and communication systems.

Essential skills include an in-depth knowledge in operating systems (OSE, VXWORKS, PSOS, WinNT), programming languages (JAVA, C++, ASM, ANSI C) as well as IP protocols and applications. You will be able to use the newest CAE tools, which afford a strong technical know-how and experience.

Support & System Integrators.

In this function you will be responsible for technical solutions in the area of 2nd level support. As the main interface to our internal support technicians you are up-to-date with all technical datas. In addition you will remedially operate on-site, coordinate field tests of new products and maintain and set-up reference systems and test tools.

Successful candidates will have in-depth knowledge of communication system's and application's functionality as well as test tools. High customer orientation and good communication skills are as important as the familiarity with MS Office products and reporting tools.

Make yourself heard.

For further details or to apply for a position please contact:
Ericsson Austria AG, Mrs. Gisela Kollmann, Recruiting
Pottendorferstraße 25-27, 1120 Vienna, Austria
gisela.kollmann@sea.ericsson.se, www.ericsson.at

ERICSSON