

Gävle plant opened

Ericsson's first production facility for 3G mobile systems is located in Gävle, Sweden. WCDMA base stations will be manufactured here for a worldwide market. **News, 9**

3G – the talk of Germany

In Germany, 3G is the talk of the nation. Dominating the media are disputes over license fee distribution and stories of huge payments for roofs to be used as sites for antenna installations. **World Watch, 14-15**

Hutchison goes global

Ericsson's Hong Kong based customer Hutchison Whampoa is expanding its operations. Hutchison's account executive for Ericsson reveals that telecom is just one of several operations for the conglomerate. **14**

contact



146.50

Ericsson B share, Stockholm 29/9

NO. 15 • OCTOBER 5 2000



Component shortages have been an ongoing aspect of media reports on telecom companies during the past year. With rapidly changing developments, it can be difficult to predict the need for components. Ericsson Microelectronics is one of the manufacturers that is now increasing production in order to meet demand.

Photo: Lars Åström

Small pieces in big game

Ericsson is focusing on closer collaboration with its subcontractors in order to ensure access to components. Contact reviews the complex component industry and explains how rapid swings in access and demand affect the entire telecom industry. **News, 10-11**

Ads boost mobile Internet

Ericsson's biggest advertising campaign was launched on Monday. Around the world, TVs, billboards, newspapers and the Internet will abound with the message that Ericsson is leading the mobile Internet. **4-5**

Kids lead phone use

Young people are now the world's leading mobile phone users. In Finland, an amazing 86 percent of youngsters owns a mobile phone. Contact looks at the statistics. **9**

NEWS

Ericsson Enterprise has launched an 11 Mbps wireless LAN product. Top of its list of features is powerful protection against eavesdropping or unauthorized access. **7**

MARKET REPORT



Photo: Lars Åström

The purpose behind the CyberLab in Singapore is to better understand both Asians and young people, such as Sean Koh and Stephanie Yue, pictured, in an effort to find tomorrow's best sellers. Contact has checked the pulse in Singapore. **16-19**

AT WORK

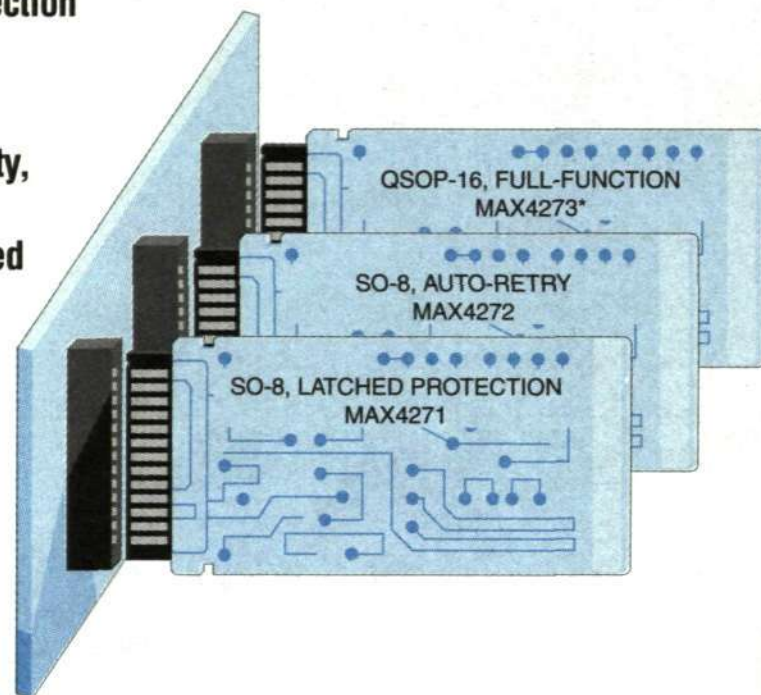
Siv Andersson's problem is quite common. She gets nervous when speaking in front of an audience. Why do so many people find that so uncomfortable – and how can you become a better speaker? **22**



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Engine blasts past competitors



Einar Lindquist, head of Ericsson's Multi Service Networks division, needn't look so worried. His division now signs, on average, one new Engine contract per week. Photo: Lars Åström

Einar Lindquist is one happy man. As the head of Ericsson's Multi Service Networks division, he has overseen a year of incredibly strong sales of his division's flagship solution, Engine.

► "I'm most proud of the Engine access order we received from France Telecom earlier this year," says Einar Lindquist. "That one was worth almost two billion Swedish kronor."

"More than anything else, however, our breakthrough into the closed French market is a sign that we're doing a very good job here at Ericsson," he says.

Engine is the division's flagship. In essence, Engine provides a transition from traditional fixed networks to the integrated 3G networks of tomorrow, offering broadband and Internet.

Customized for each client

Engine is not a product, but rather a solution that can be adapted to the specific needs of individual operators, gradually guaranteeing a financial path towards multi networks.

The Engine brand has been a real success. Ericsson's solution has approximately a 40 percent share of the global market.

On average, Ericsson signs one new Engine contract a week for switch or access solutions.

In less than a year, Engine solutions totaling USD 1.3 billion have been sold. Of some 30 contracts that have been signed, about half have been with major operators.

None of Ericsson's competitors can come close to that. Although Siemens has its Surpass solution, Alcatel its 2IP, Motorola its Aspira, Lucent its 7R/E and Nortel its Succession, Ericsson's Engine solution is the standard to which everyone compares.

As the first solution on the market, it has led the way.

It works

"Not only have we signed contracts, we've delivered solutions and have proven that they work," says Lindquist.

"Our first and largest client, BT, received

its deliveries according to plan, to the day, and have been very satisfied with us."

So far, 30 switches in BT's UK network have been replaced by the Engine solution, with two additional switches being replaced each week.

Working with BT has also demonstrated another side of the new telecom world. The future will be a dynamic world where solutions continue to evolve and where suppliers collaborate with customers through their local companies.

Simple philosophy

Until now, Ericsson's Engine contracts have mostly involved ATM switches with multi service offerings and access products, such as Ericsson's Access Ramp switch, which enables a smooth transition from classic telecom networks to broadband.

The philosophy involved is simple:

By replacing a number of old stations with a few integrated Engine switches, operators can save between 30–50 percent of their switching costs and similar amounts in terms of infrastructure, transmission, operating and maintenance costs.

Time for new version

Key forces behind current developments include the Internet and deregulation.

"Internet traffic doubles every three months and there is an enormous amount of pressure on operators to offer not only telephone services but also broadband, e-business, banking, and so forth," says Einar Lindquist.

"Ultimately, end users are in charge. They want the ability to communicate from anywhere – work, home, and all points in-between. Preferably from a mobile terminal that uses the same number for everything."

While Engine has been a success, the time has now come to take the next step.

Starting in October, a new generation of Engine will be launched. It completes the transition, incorporating multimedia services using an integrated IP platform that harmonizes with third-generation mobile phone networks, which are based on work conducted by the 3GPP (Third-generation Partnership Project).

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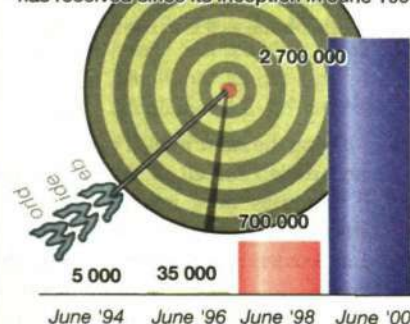
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DID YOU KNOW THAT...

Ericsson's website popularity is expanding exponentially

Average number of hits per day, during four comparable periods, that www.ericsson.com has received since its inception in June 1994.



New global campaign to boost brand

Ericsson's most comprehensive advertising campaign to date began on October 2. The company is to spread its mobile Internet message to 14 countries in five continents.

"As far as I know, this is the most ambitious and broad-based campaign that Ericsson or any other company has conducted," says John Giere, who is responsible for branding at Ericsson.

The campaign encompasses all divisions, several of which have participated actively, either as sponsors or as part of the group that has produced the message.

A total of USD 60 million is being invested in advertising on TV, in public locations and in business and trade press.

A strong brand

The aim of the campaign is to strengthen Ericsson's leading position in mobile Internet.

This means that the company must have total solutions that include all features, from terminals and applications to systems, backbone networks, service and know-how.

But it also demands a strong brand.

It is particularly important considering that competition is growing and products are increasingly resembling one another. Brands are becoming one of the factors that make a company unique.

"We have to communicate who we are and what we do. People will receive a more complete picture of Ericsson, not only be aware of our phones," says John Giere.

No hype

In some ways, this campaign is something of an anti-message. While many people are creating a large amount of hype around mobile Internet, Ericsson is trying to use its campaign to bring mobile Internet down to earth.

This is not major hype, or super-complicated – on the contrary, mobile Internet is simple, for everyone, anytime and anywhere.

It is an "everyday thing", as the campaign tells us.

However, people will be made aware of the power of mobile Internet and its market, which is starting to accelerate.

It is anticipated that 600 million people will be using mobile Internet by 2004 and that, within two years, it will be as common to communicate using a mobile phone as it is to use a wireline phone.

Difficulties

Naturally, having the same imagery, content and design for all of the campaign countries does involve certain difficulties. Advertising that is praised in Sweden may not work at all in China.

"Naturally, we have taken this into

consideration in planning and have worked on it. It remains to be seen how it will work, but I believe that the result will be favorable. At our local company in Argentina, for example, the reactions were extremely positive. The employees there thought that the northern Swedish landscapes looked just like Patagonia in southern Argentina," says Eva Andersson, project manager for the campaign.

Same importance internally

An internal campaign is starting up at the same time as the external campaign. This is also a relatively new activity.

The James Bond campaign conducted by the Consumer Products division had a similar focus involving the employees, but this is the first time that such importance has been placed on internal communications with employees in conjunction with an Ericsson-wide advertising campaign.

"It is of at least the same importance that our employees understand our message about mobile Internet, as it is to disseminate the information externally. Our employees are our best ambassadors and that is why we have invested substantially in the internal campaign," says John Giere.

Lots of activities

The campaign includes an internal website, which all employees can visit to look at the advertising features and images, and read about the campaign.

There will also be internal launches – for example, the campaign was recently shown to employees in Kista in Sweden. Several countries are also planning their own activities.

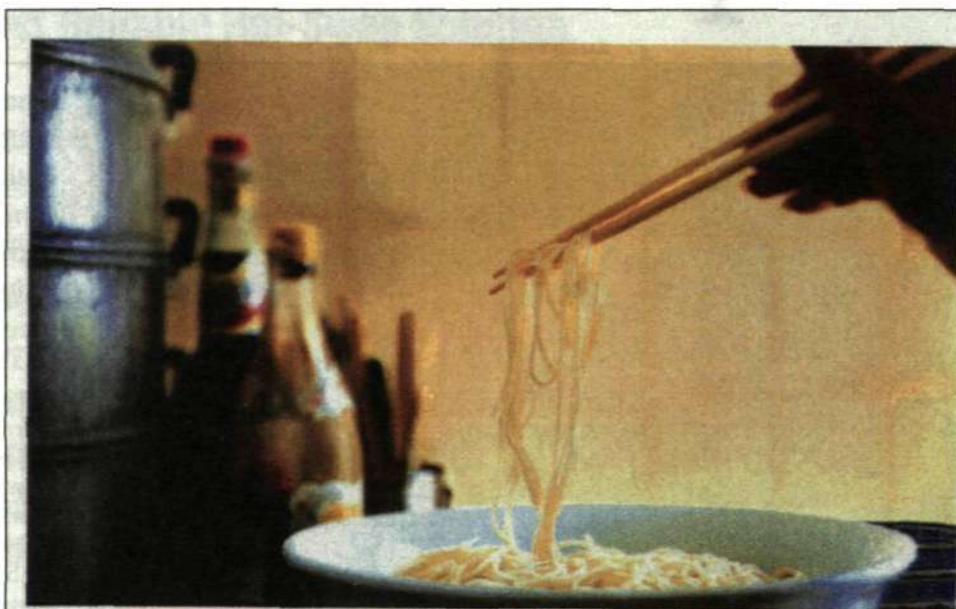
The Australian company is to launch a competition for employees' children. The one that draws the best Christmas card using the mobile Internet theme will have his or her card published and will win a trip. In the US, a video cassette is to be sent to all of the 10,000 employees' families as a gift from the company.

Ericsson has been criticized for giving the market too many different messages. Does this campaign mean that Ericsson will now reach its public through a single company-wide core message?

"That is a good question, says John Giere.

"If you look at the campaign, the answer is yes, but it is really a question to be answered by the entire company. It is all up to Ericsson's 100,000 employees," explains John Giere.

You mentioned a series of rather traditional media, in which the campaign will appear. Are there no plans to practise what you preach and focus on conveying the message via mobile



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ERICSSON 

*Source: Dataquest

In parallel with the huge advertising campaign, an internal campaign is also being started, which includes an intranet site at inside.ericsson.se/mobileinternet. In addition, there is a series of local initiatives, such as giving employees postcards with the mobile Internet message to send to friends.

Internet, for example through WAP?

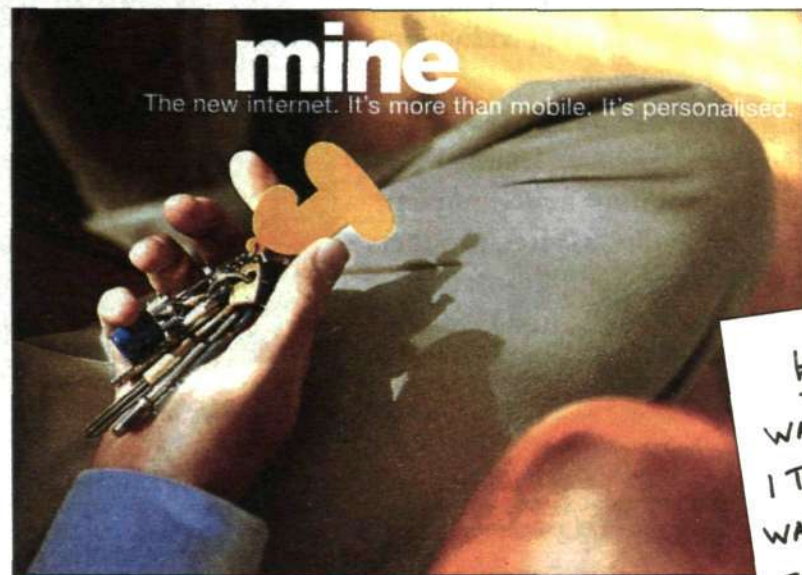
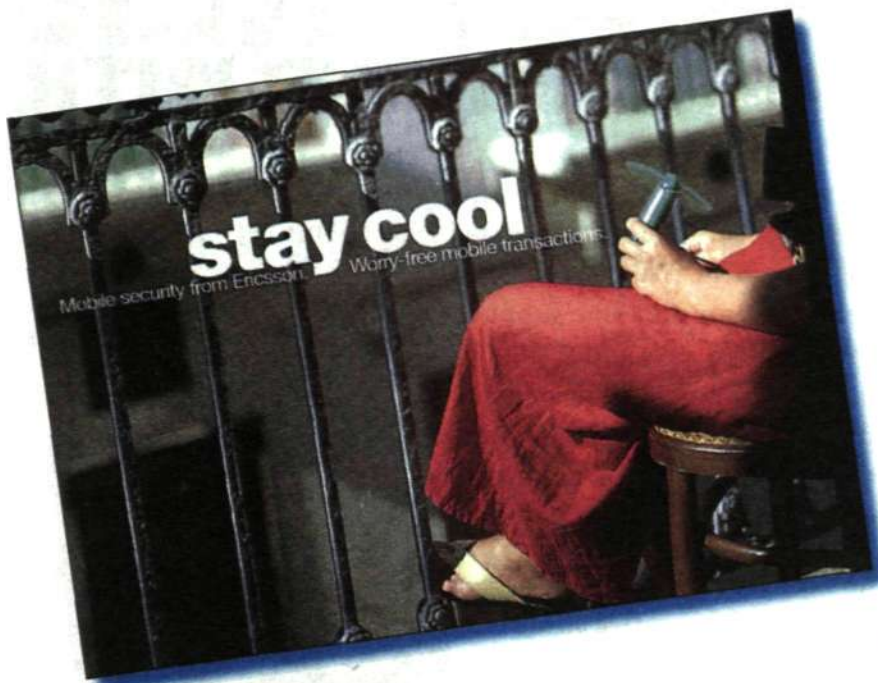
"We have plans," replies John Giere and Eva Andersson, with a secret laugh.

"Let's just say that there will be a strong element of new media in this campaign, which we don't want to reveal just yet."

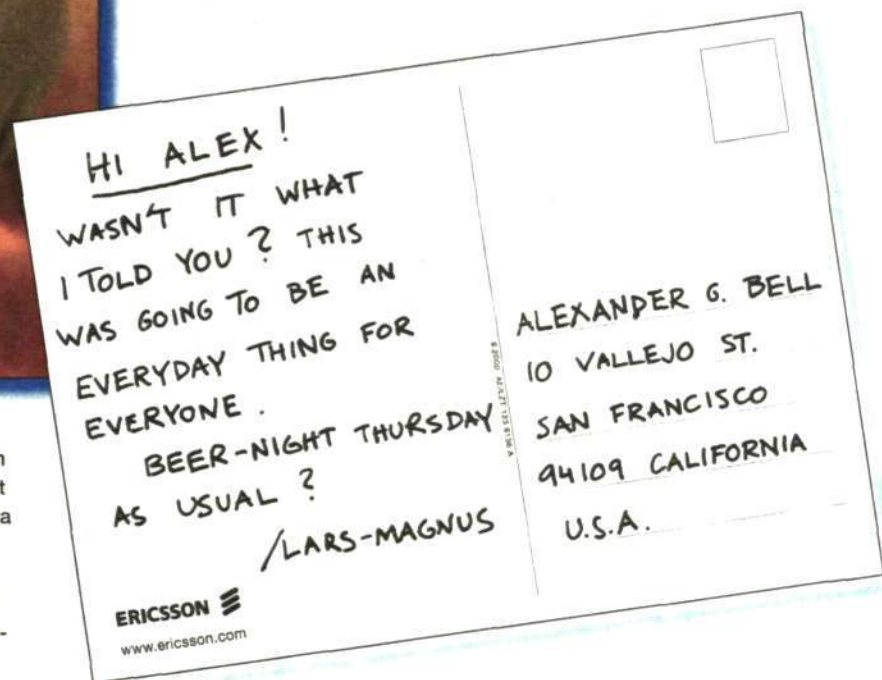
Mia Widell Örnung
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FACTS/THE CAMPAIGN

- What? Ericsson's largest and most broad-based campaign ever.
- Who? Ericsson has produced the campaign, assisted by the Publicis and Media Edge advertising agencies.
- When? From October 2 until year-end.
- Where? Australia, China, Hong Kong, Singapore, France, Germany, Italy, Spain, Sweden, the UK, the US, Canada, Argentina, Brazil, Mexico.
- How? Through a broad media mix using TV, billboards, business press, trade magazines and the Internet.
- Why? To make the general public aware of Ericsson's strength and breadth and to show the possibilities of mobile Internet.



One of the campaign's core messages is that mobile Internet is much more than an Internet that can be carried around – an Internet in your pocket. Instead, this provides an entirely individual, extremely personal Internet. A cliché? It perhaps sounds that way, but it is not actually the case. Mobile Internet offers opportunities to personalize services in a way that conventional Internet does not allow. The mobile terminals are, to a larger degree, a personal belonging, which is mainly used by only one person. In addition, the network can sense where a person is located and when and can adapt the services and information to the user's particular situation. It is the user's needs and wishes at a particular moment that are decisive. Which hamburger kiosk is closest and how can you get there?



Divisions believe in a unified message

Contact asked the communications managers at two divisions about how they intended to use the campaign and how they have been involved in formulating the message.

Anna-Karin Bodin is responsible for internal communications at the Multi Service Networks division.

How does the message about mobile Internet link with your division, which has a lot to do with the fixed network?

"There is no conflict between the campaign and our operations. It is a great campaign and we will show that we are part of it to the greatest extent. The mobile Internet is a tool you select to connect up".



Anna-Karin Bodin

"Our product is the infrastructure

and the backbone network is still fixed."

How do you plan to spread the message in your division?

"It will be on our intranet, DMN Today, which is a news-based site. We intend to spread the word via internal TV, through large manager's meetings and meetings with all personnel. Internal communications is extremely important for Multi Service Networks."

"I do not know whether the managers will review this with their groups."

Do you believe that we will now attain the goal – a common message from Ericsson?

"Yes, I think so. And I believe that we are finally mature enough to understand the strength inherent in being united."

This campaign is supposedly more firmly anchored internally than earlier campaigns. How were you involved?

"We have received the minutes of

meetings, reports and been invited to submit ideas, comments and criticisms."

One of the campaign's messages is that the mobile Internet is for everyone "It's an everyday thing." How do you use the mobile Internet personally? Do you WAP?

"Not yet. I have a T-18, but my WAP phone is on its way. I haven't really gotten used to my PalmPilot either, but I'm on the way to becoming part of the mobile world."

Monika Samuelsson is responsible for market communications and PR at TDMA system, in Kista.

You work with countries in North and South America that are not as mobile and computer literate as, for example, in Europe. How do you intend to convey the message of a mobile Internet for all?

"I do not see any conflict. In a few of the countries in South America, we are seeing that both the operators and consumers are jumping a stage. New operators are building 3G net-

works directly and consumers move from not having a mobile phone or a computer to buying a WAP telephone as their first phone."

How do you plan to spread the message in your division?

"Among other ways, through the Internet, intranet, conferences and workshops. It is also the case that each local company manager assumes responsibility for spreading the message. A number of local companies have already contacted us and want more information. They are really enthusiastic."



Monika Samuelsson

This campaign is supposedly more firmly anchored internally than earlier campaigns. How were you involved?

"We have a project leader who was a member of the project group that for-

mulated the message. We have also been sponsors. Many of us have dedicated a lot of time to these issues."

Do you believe that we will now attain the goal – a common message from Ericsson?

"Yes, I am convinced. This is the first step toward global cooperation."

One of the campaign's messages is that the mobile Internet is for everyone "It's an everyday thing." How do you use the mobile Internet personally? Do you WAP?

"I just received an R320 WAP telephone, but have not had the time to master all of its features. It will be a real pleasure to be able to read e-mail and schedule times over the telephone. In the first phase, the telephone will be an even better work tool."

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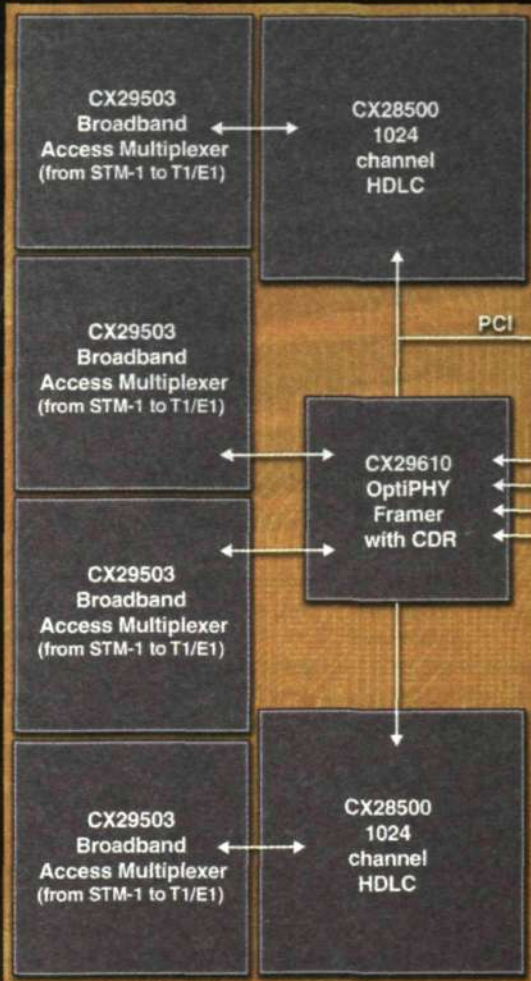


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Fast and secure without wires

The new 11 Mbps Wireless LAN products from Ericsson Enterprise combine high-speed data, wireless capability and security. The unique Ericsson security solution, WLAN Guard, offers powerful protection against eavesdropping or unauthorized access.

WLAN products are used to expand wired LANs, or to construct completely wireless networks. Wireless LAN users are able to move freely within the range of coverage. Users can, for example, take their laptop computer with them to meetings, the cafeteria or a colleagues office and remain connected to the network.

11 Mbps WLAN consists of either one or several base stations, WLAN cards for users' computers and software for the configuration, operation and control of the network as well as the WLAN Guard security solution.

Business men prime target

WLAN Guard controls functions such as authorization and encryption of traffic, making it possible to achieve high levels of security, even in networks containing multiple base stations spread out over a large area.

The primary target audience for 11 Mbps WLAN products is business customers, although operators and service providers can also benefit

from the solution. Its capacity, combined with its security, make the product ideal for public and quasi-public applications, such as when an operator offers wireless Internet access at "hot spots" such as airports and hotels. Operators can also offer companies the ability to expand their company networks at these hot spots, using the operator's WLAN access points.

DSSS standard

Ericsson's 3 Mbps WLAN products, which are based on FHSS technology (Frequency Hopping Spread Spectrum) and the IEEE 802.11 standard, will continue to be available in Ericsson's product portfolio. They will be sold alongside the new



A PC card for the new 11 Mbps WLAN.

11 Mbps WLAN products that are based on the IEEE 802.11b standard for DSSS technology (Digital Sequence Spread Spectrum).

Kari Malmström
freelance journalist



Ericsson unveiled a prototype WCDMA phone at the trade show that was capable of receiving streaming video.

Photo: Lars Åström

Mobile Internet focus of show

» Broadband and mobile Internet go hand in hand. Ericsson showed off some of the building blocks for this new era at the Networks Telecom IT trade show in Sweden last week.

We've heard it said before – how better quality, increased capacity and a host of new computer services will, in time, make our everyday lives easier. Now there are several products available that can demonstrate the possibilities of this new technology.

"Now is the time to demonstrate, in a concrete fashion, what we mean by the mobile Internet," says Dag Gårdhelm, one of the demonstrators at Ericsson's trade show display.

Ericsson also showcased a variety of new WAP services, various broadband solutions and how, for example, to synchronize a Palm Pilot address book and calendar with the new R520 GPRS phone using Bluetooth.

Norstan acquires retail unit

» The US company Norstan is buying Ericsson Enterprise Systems' North American retail operations for the sale of enterprise solutions. Norstan, North America's fourth largest retailer in the field, will initially start by selling Ericsson's MD110 business switch.

Under the terms of the contract, Norstan will also oversee sales of Ericsson's expanding IP product offerings to companies in North America.

Although roughly 100 Ericsson employees will be affected by the sale, they will be offered employment at Norstan.

Negotiations are also under way to sell Ericsson Enterprise Solutions' retail operations in Europe. These sales are part of Ericsson Enterprise's strategy to divest itself of internal direct sales operations and focus instead on sales through dealers and partners.

3G contract with J-PHONE

» Prior to the introduction of commercial 3G services in Japan in 2001, Ericsson has reached an agreement for collaboration with Japanese operator J-PHONE. The contract covers the startup of a WCDMA network in regions round Tokyo, Osaka and Nagoya. Ericsson will be the sole supplier in the three regions. J-PHONE is Ericsson's largest customer in Japan. The operator currently has nine million subscribers to its PDC system. Of those, 2.7 million are connected to mobile Internet services.

Ericsson also has a 3G contract with NTT DoCoMo of Japan.

Technical trade press hears the facts

Ericsson recently invited technical trade journalists from around the world to attend the Mobile Technology Summit in London. A total of 94 press representatives attended and roughly one hundred interviews were booked with experts and key personnel at Ericsson.

One of the primary messages was that mobile Internet is much more than simply a combination of mobility and the Internet. Mobility en-

sures that people are always connected while the Internet is the one network shared by everybody.

The mobile Internet will involve personalized communications created specifically for users, and incorporate positioning services and portals. Market potential is enormous and Ericsson is in the forefront, conducting a significant portion of the development work for the mobile Internet.

Of particular interest were the new R380 WAP phone, the smart

phone, and the Mobile Internet Café. At six different stations, Ericsson demonstrated live applications such as positioning and navigation, banking, e-business and various Bluetooth and WAP services.

Torbjörn Nilsson, Senior Vice President, Marketing and Strategic Business Development at Ericsson gave one of the presentations. He conveyed the fact that every day 600,000 subscribers are added to mobile phone networks. The consequence of this is that today everyone

is communicating with everyone else – person to person, person to machine and machine to machine.

Jan Uddenfeldt, Senior Vice President, Technology, explained that Ericsson's solutions for mobile Internet are focused on offering complete solutions from terminal to transport over backbone networks. Open platforms are an important aspect as are strategic alliances with partners.

Lars Cederquist
lars.cederquist@ime.ericsson.se

Business switch moves into the IP world

The latest version of Ericsson's business switch for small and medium-sized companies, BusinessPhone, has been updated to include IP capabilities. With the help of an integrated IP gateway, the new version can even handle IP alongside ordinary analog and digital telephone lines.

The new version of BusinessPhone offers companies a cost-effective solution to gradually integrate IP with traditional telephony. It will now be possible to take advantage of IP links for traffic between telephone systems at various locations. IP technology also creates the conditions necessary for communication over the Internet and intranets.

BusinessPhone has a reputation of being a small switch with big options. It sports a host of advanced functions, which would otherwise be found only on much larger, more expensive, systems.

The smaller model, BusinessPhone 50, can handle up to 64 connections, while the larger Business-

Phone 250 can handle between 20 and 200. The system is flexible and supports many different types of operations. BusinessPhone can, for example, be configured as a call center with the assistance of the built-in system for automatic queue management.

One or more BusinessPhone units can also operate in conjunction with a larger switch system, and are therefore appropriate for local offices. The system offers functions such as computer supported telephony, call control and unified messaging.

Other new functions included with the new version are Web-based tools for configuration, operation, maintenance and upgrades, as well as a new wireless telephone for exposed environments.

Both new and old BusinessPhone customers will benefit from these new features. Existing systems can be upgraded to handle IP as well as the other newly added features.

Kari Malmström

Mobile phones revolutionize TV broadcasts

In the future, television reporters will be able to easily broadcast video images over the Internet or on TV using 3G mobile networks. Ericsson recently demonstrated its new solution at a trade press gathering in London.

"Mobile Internet will enable reporters to quickly transmit video and text anywhere, at anytime, reaching a global audience," says Mikael Halén, head of marketing for WCDMA.

Today, television companies have to use satellite up-links in order to reach national or international audiences when they are transmitting from various events and locations outside the studio.

With this new technology, transmissions will become significantly cheaper and live reporting from various locations will occur much more quickly. For media companies, this will be a major competitive advantage.

"Transmitting video images in real-time over a mobile network is a

very capacity intensive application, and clearly demonstrates how 3G systems can be utilized by a specific target audience."

WCDMA allows speeds of up to 384 kilobits per second in metropolitan areas, which provides very good image quality," says Mikael Halén.

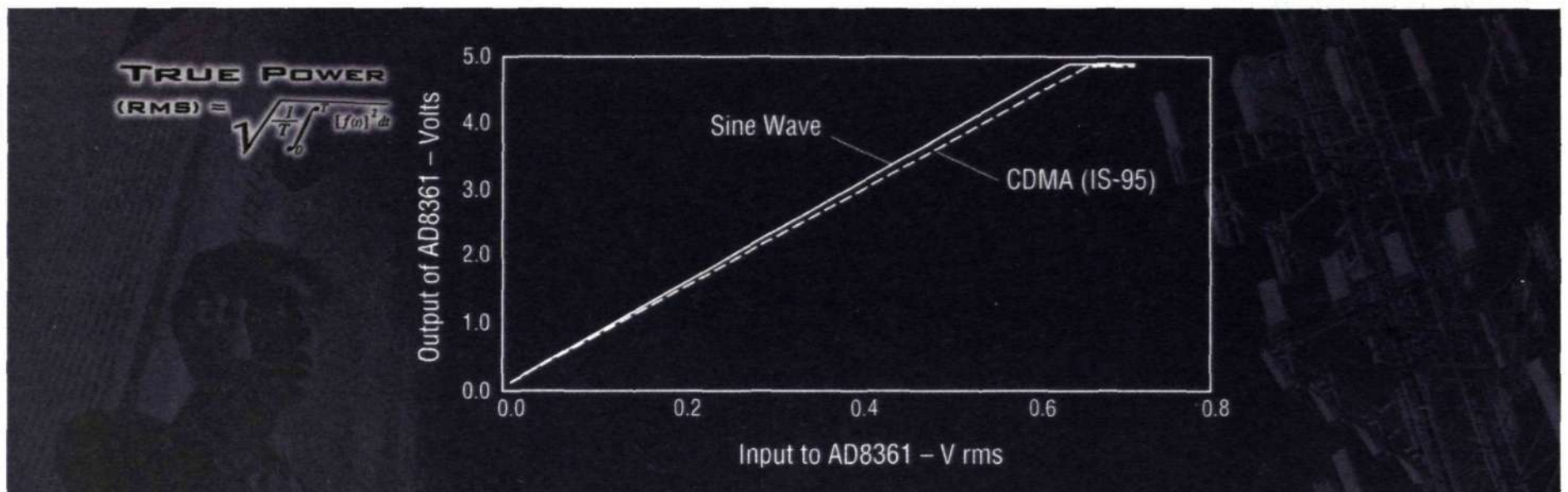
Ericsson demonstrated the solution in London together with the media company Popwire, which is known for, among other things, transmitting live concerts over the Internet.

Popwire has developed software to easily mix and edit material from various cameras and video formats.

"This is just one example of how Ericsson is working with various application companies. We are now continuing to work with other partners that are focused on music and videos, to demonstrate what the new mobile networks can be used for," says Mikael Halén.

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Younger generation leads mobile phone use

Young people in Finland and Sweden are now the world leaders in mobile phone usage, according to fresh statistics reported by Ericsson's Consumer Lab. Their research confirms the view that it will be the younger generation that drives mobile Internet developments.

An incredible 86 percent of Finland's youngsters owns a mobile phone. That is seven percent above the average ownership rate in the country. Even in Sweden, the younger generation has surpassed all others. There, 79 percent own a mobile phone, which is five percent above the average.

"Young people are the consumer group that adopt new functions and services first and most rapidly," says Carl Hoffmeister and Raila Mörén at the Consumer Lab.

That trend is very noticeable for SMS usage. Sixty percent of young people in Finland and Sweden send SMS messages daily, more than double the rate for populations in both countries as a whole. More young people in Finland also send mobile e-mail. Thirty-six percent say they would like to have WAP capability, ten percent more than the general population.

Increasingly important

"We are currently experiencing a paradigm shift. Young people are very social and take advantage of all possible methods for communicating more efficiently, remaining in

constant contact with their social groups," says Bo Albertsson, head of marketing at the Consumer Products division.

Ericsson has long been aware that this shift would occur. The Consumer Products division has modified its plans and made sure that it developed telephones that also attract and satisfy that important consumer group, such as the R310 and the moderately priced WAP phone, the A2618.

"It's important that we listen to our young people and develop products for them. The younger generation is becoming increasingly important," says Henrik Pålsson, head of Ericsson's Consumer Lab.

Today's youngsters already constitute a powerful customer segment. They also have significant influence on purchases made by their families.

"Teenagers are in charge when it comes to technology. Young people say which television, mobile phone, computer and sometimes even which car a family should buy," says Bo Albertsson.

"And today's younger generation will be even more important when the transition is made to the third-generation mobile system. Today's 15-25 year olds will be involved in driving the developments towards mobile Internet and 3G services," says Henrik Pålsson.

At least ten SMS a day

The study also confirms the picture of Stockholm and Helsinki as being at the epicenter of the mobile world.



The younger generation now accounts for the greatest telephone ownership density in several countries. An amazing 86 percent of all youngsters in Finland now have their own mobile phone, the highest mobile phone density rate in the world.

Photo: Lars Åström

Sweden and Finland, along with Japan, will more than likely constitute the driving forces when it comes to development of the mobile Internet. Finland has the world's highest mobile phone penetration rates, and Sweden probably has the highest percentage of computers in the home, combined with high mobile phone ownership rates. The same trend has not been observed in the US. There, it is primarily adults who use mobile phones, and

telephone ownership rates remain low in comparison with Scandinavia.

Earlier start

The Finnish study also outlined clear distinctions between girls and boys. About 38 percent of young girls send at least 10 SMS messages a day, ten percent more than boys in the same age group.

"We find that boys more actively use fixed Internet connections than

FACTS/YOUTH AND IT

Finland:

Mobile phone density: 86 percent among 15-25 year olds, (79 percent among 15-69 year olds)

Internet at home: 39 percent (32 percent)

SMS: 60 percent (24 percent)

WAP: 10 percent have tried (5 percent)

Would like to have WAP: 35 percent (19 percent)

Sweden:

Mobile phone density: 79 percent among 15-25 year olds, (74 percent among 15-74 year olds)

SMS: 60 percent (28 percent)

Mobile e-mail: 15 percent (7 percent)

Internet at home: 62 percent (56 percent)

Would like to have WAP within 12 months: 13 percent (10 percent)

USA:

Mobile phone density: 34 percent (40 percent)

Internet at home: 44 percent (38 percent)

Rapid expansion of 3G networks seen worldwide

Ericsson is bracing itself for an impending global struggle over contracts for 3G networks. Network operators are now guaranteeing rapid installation and setup of turnkey projects.

Consequently, Ericsson signed agreements on September 21 with both Skanska and NCC.

Both construction companies will be cooperating with Ericsson in the construction of a 3G networks around the globe. They will oversee everything from localization of appropriate sites to helping to arrange construction permits, contracts with land owners and practical arrangements.

Both are strong

"Speed is a decisive factor and we need partners who have strong backgrounds in construction," says

Melker Norlund, line manager at the Global Services division and one of the people who formulated the contract.

Skanska and NCC are similar companies. Melker Norlund explains that contracts were signed with both since they are strong in different markets, and that it is an important competitive factor for Ericsson.

Very satisfied

Anders C. Karlsson, President of Skanska Europe AB, is very satisfied with the agreement.

"It is like an umbrella contract with rules for how we should work together in different countries. I think that it will be successful for both parties. We will provide strong support," says Anders C. Karlsson.

Jesper Mott

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State-of-the-art facility

Ericsson's most modern production facility was inaugurated in Gävle on September 15. WCDMA base stations for the third-generation mobile phone system, will be manufactured there for a worldwide market.

"We can call it the factory of the future," said Björn Boström, Senior Vice President, Supply and IT, when he inaugurated the new production facility for 3G network equipment in Gävle. Around 90 invited guests and some 60 or so workers at the new unit participated in the official inauguration.

"It's no coincidence that Ericsson's first production facility for third-generation mobile telephony, 3G, has been built in Gävle. Manufacturing of new equipment for mobile phone systems has started here ever since Ericsson established itself in Gävle in 1978," says Björn Boström.

"The plant has made pioneering efforts. It is here that the expertise has been developed. It was clear from the beginning that production would be situated here."

First of all, all distribution worldwide of the new technology will occur from Gävle. So far, Ericsson has

landed twelve of the 17 commercial contracts for WCDMA that have been signed in various countries.

Ericsson anticipates that market volumes will expand as much in three years as they did in ten years with GSM. Second-generation mobile systems will, however, continue to increase in volume for several years into the future, parallel with the introduction of WCDMA.

"Until now, the new Ericsson plant in Gävle has only delivered test units. Before the end of the year, however, the plant should be put into commercial operation. Japan will receive the first deliveries sometime during spring 2001," says Lars-Erik Eriksson, head of the new unit.

"One could ask the question whether we are going to continue to be a world leader in mobile phone technology in the next technology generation. New competitors, and old, show up, determined to regain what they lost when Ericsson accelerated away from them in the GSM area," says Björn Boström.



Björn Boström, Senior Vice President, Supply and IT, cut the ribbon when Ericsson inaugurated the new manufacturing unit in Gävle.

Photo: Leif Jaderberg

"Now the production muscle is in place. We need to show that we have the resources required to produce our products at the rate that is required."

Ericsson has invested a total of SEK 700 million in Gävle this year.

With 3G, the new trend in communications, the Mobile Internet, will become a reality. WCDMA will offer up to 50 times faster data transmission speeds than today's GSM. Technology will make a number of multimedia applications and mobile terminals possible.

Jenny Persson

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Component shortages soon

Excess capacity, which resulted in lower margins for manufacturers, was replaced by shortages and runaway spot prices for certain electronics components. Now there are signs that the component market is finally returning to a more stable situation.

More than 100,000 WAP telephones and 107,000 handheld computers were sold in Sweden during the first half of this year, according to the research firm IT Research in a recent report.

IT Research predicts that a half million WAP phones will be on the market before year's end. Assuming, of course, that the component shortage will not cause a slowdown in production.

Component shortages have been a more or less recurring theme in reports about telecom and datacom companies over the past year. Component shortages are not a new phenomenon, however.

Been there before

In conjunction with the PC boom at the end of the 1980s, the sudden increase in demand led to acute shortages of items such as memory. Autumn 1996 saw a shortage of flash memory and radio circuits. This year has seen shortages in more or less all product areas. As this issue goes to press, certain kinds of tantalum condensers are currently the most difficult to obtain.

Talking about a "component shortage" can be misleading, however, since component manufacturing is not a single industry. There are both standard products – similar to bulk goods and are traded as such on the spot markets – and more sophisticated units. While there might be shortages of one kind of component, there can be simultaneous surpluses of others.

"The electronics industry is complex and access to components varies all the time. Manufacturers look to where they can make money and expand their capacity accordingly. Over time, that leads to overcapacity," says Lennart Nilsson, a buyer for Corporate Technology at Ericsson.

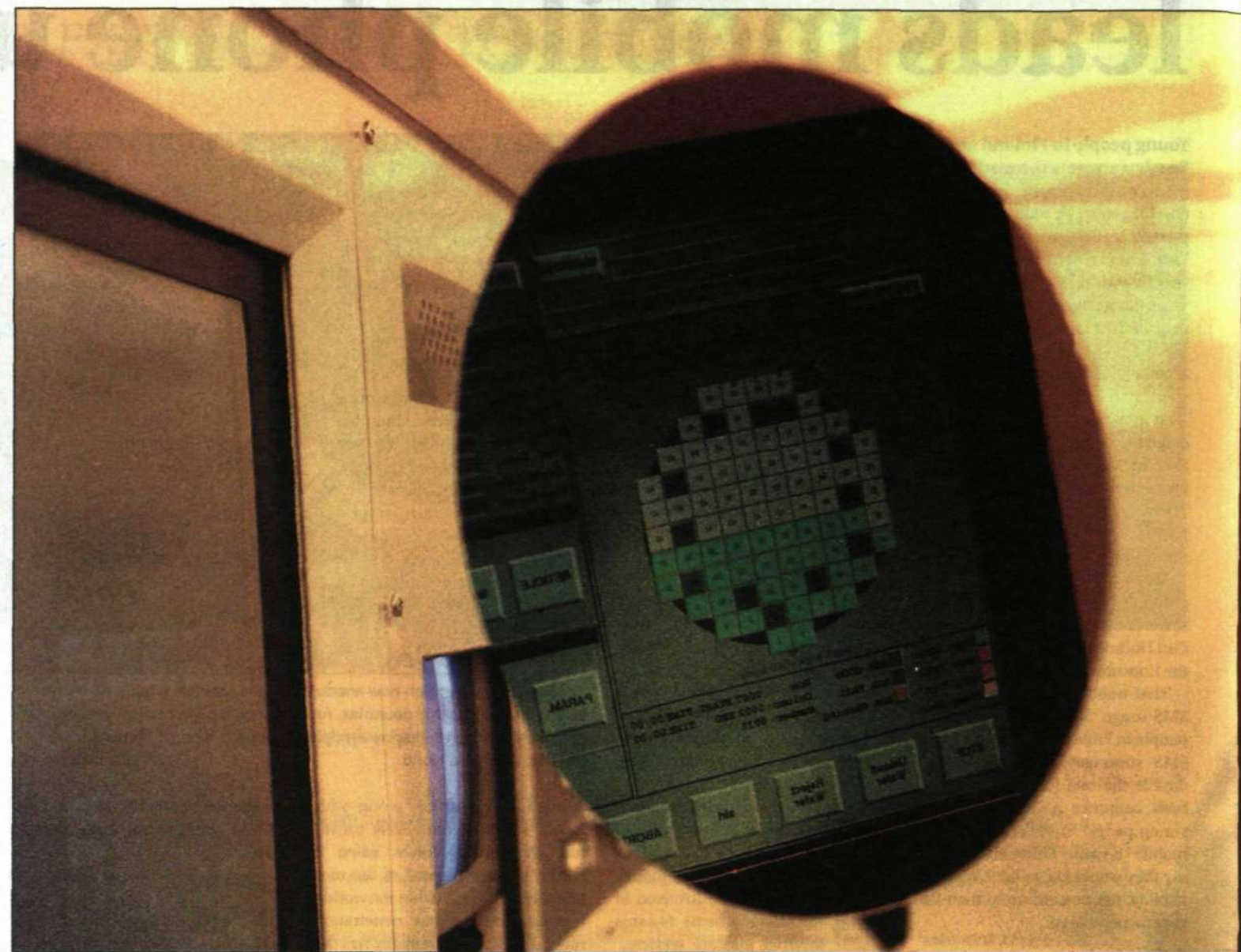
It is not just the telecom industry that is affected by component shortages, although the media has emphasized the problems of the telecom industry. Nor can the increased demand be attributed solely to the boom in mobile telephony.

The automotive, computer/IT, entertainment and telecom industries are all experiencing very strong business cycles simultaneously.

Murky relationships

"There has been rapid growth in the number of technical products, in general. This development has been reflected in share values in the semiconductor industry, which have gone straight up during the first half of this year," says Urban Ekelund, an analyst at Redeye.

When Sony launched Playstation 2, for example, the demand for processors increased dramatically. And if a mobile phone manufacturer success-



A silicon wafer stepper-camera makes the pattern for integrated circuits at Ericsson Microelectronics in Kista.

fully launches a new phone model, it is more than likely the other manufacturers would notice a reduced availability of certain components.

Relationships between companies provide further proof that it is a complicated market. It is not always possible to separate companies into clearly defined categories of suppliers and customers. Rather, everyone supplies a little bit to everyone else. The biggest manufacturing countries are the US, Japan and Taiwan.

Grim situation

Before we reached the situation that we are in today, with substantially improved earnings for component manufacturers and sky high spot prices, many electronics companies were in a fairly dire situation.

In broad terms, excess capacity in the electronics market has been created over the past three years, especially in areas such as memory and passive and discrete components, according to Bo Österberg, head of components at Corporate Sourcing.

"Buyers, including Ericsson and its competitors, have taken advantage of the surplus, which has resulted in lower prices. This, in turn, has meant poor profitability for manufacturers and reduced investments in capacity over a long period of time," says Bo Österberg.

Poor profitability has led to changes within the electronics industry. Vertically integrated companies are shedding non-core operations, while companies that manufacture both standardized and ad-

vanced components are separating their operations from each other. Motorola has, for example, sold its component manufacturing to the US firm Texas Pacific Group, while Siemens has spun off its component manufacturing to two companies, Infineon and Epeos.

At the same time, however, there is a trend among large companies to buy up smaller ones.

"You can see a wave of consolidation, led by American contract manufacturers. Even in Sweden, there are clear signs of such developments," says Jonas Blomberg, an analyst at Redeye.



Jonas Blomberg

High-tech products do well

The rapid recovery of world markets towards the end of the 1990s led to a sudden increase in demand for technology products. MP3 players, mobile phones, computer games, and automobiles. Suddenly, the consumer party was a reality.

All of these products require numerous components. Since it takes between one and two years to increase production capacity, manufacturers quickly reached the upper limits of what they were capable of producing.

"Once manufacturers start running their production lines at full capacity, delivery times grow longer.

Orders that once took four weeks, would now take perhaps 16 weeks. That creates a sudden shortage, leading everyone to place even bigger orders, and so forth. This chaos continues until the parties involved learn to deal with the situation and more balance has been restored in terms of supply and demand," says Bo Österberg.

"If we have a close, long-term relationship with a manufacturer, they'll do everything they can to help us out," he says.

Forecasting difficult

Long-term planning and the ability to make accurate forecasts of sales developments are key factors in component supply. The ability to make accurate forecasts differs between mobile phones and mobile systems. Sales of mobile phones are influenced by consumer demand, which in turn is based on millions of individual buying decisions. A new trend, such as many users suddenly wanting two or more phones for different needs, can have a major overall effect on sales.

Likewise, the decision on the part of many individual consumers to wait for the next telephone model can result in lagging sales. Such developments are difficult to predict, making it hard for the industry to agree on realistic forecasts.

Sales trends for mobile systems are more predictable. They are determined by the size of planned base station expansions which, in turn, are controlled by anticipated devel-

opments in traffic and the number of subscribers. As a result, component needs for mobile systems are more predictable than for the mobile phone side.

Light at end of tunnel

Currently, there are several signs that the worst of the shortages are over and that markets are returning to normal.

In its latest report, Motorola stated that the company has control over the situation. Semiconductor manufacturers have seen their share prices tumble during September, as markets started worrying about rapidly falling spot market prices for microchips.

Spot suppliers have started to contact Ericsson, offering shipments of components that were previously difficult to locate.

"We'll probably see a more balanced market next year, even if the shortage situation is far from over," says Bo Österberg.

One of the reasons for the recovery is that mobile phone sales, for the first time, were lower this year than industry forecasts predicted. Ericsson had calculated market volumes to be in the neighborhood of 400-440 million units, while other companies estimated the market to be around 500 million units in size.

Indicators now point towards sales figures that will be in line with Ericsson's forecast.

Since component manufacturers boosted production to meet increased demand, components that were pre-

over Long-term planning the easy solution

Ericsson expects strong growth of third-generation mobile phone systems. In order to ensure access to components, Ericsson met with Japanese suppliers last week to share its vision of the future.

"Once we begin delivering 3G systems, we believe that it will only take us three years to reach the same levels that we were at after ten years with the digital 2G systems," said Ericsson's President Kurt Hellström at the meeting in Japan.



Kurt Hellström

Lingering shortage

Unexpectedly strong demand for telephones led to a component shortage that plagued the telecom sector this year. In order to prevent such problems in the future, Ericsson has taken the initiative to clearly communicate its long-term plans with its suppliers.

As part of this effort, Ericsson held a special supplier seminar for the first time in Japan last week. Around 300 management officials from some 40 Japanese component suppliers came to hear Ericsson's vision of the future.

Manufacturers such as Matsushita, Murata, TDK and Toshiba were among the participants.

"Ericsson has the ambition of

being a leader in 3G systems as well, and our suppliers also need to be well prepared," says Lennart Nilsson, purchasing manager for Corporate Technology.

"It will be even more important to have a close collaboration so that we can identify customer needs together at an early stage. We need to share the information we have about the market," says Lennart Nilsson.

Longer perspective

Normally, Ericsson operates on a planning horizon of 12-18 months. In order to give suppliers a better chance to plan their capacity, Ericsson is now operating on a three-year horizon for its component needs.

"Lead times are such that in some cases investments need to be made now if suppliers will be able to respond to our needs for components. This includes such things as acquiring land to build a plant. For that reason, it is important that we and our suppliers have the same vision of the future," says Lennart Nilsson.

2G will remain strong

Even as the first 3G systems are being delivered, and growth is taking off, Ericsson expects to see continued strong growth within second-generation systems.

Developments will be comparable to those of the first-generation, NMT.

NMT was introduced in 1982 and culminated in popularity in 1997 –

even though the second-generation system had been launched in 1992. The same pattern is anticipated with the introduction of the 3G system.

"Some people think that 2G will die out simply because third-generation is being introduced. That is not the case. 2G will continue to grow and will live on for many more years. Voice is a primary function and older systems will be upgraded to handle data transmission," says Lennart Nilsson.

Needs will increase

The need for components is expected to increase dramatically between 1999 and 2003. That development will not follow a straight line, however. Rather, growth is expected to accelerate over time.

Ericsson frequently receives questions about which applications and services will be the driving forces in the next generation system.

"We foresee numerous applications. As yet, it is too early to say exactly which of them will be a big hit. But regardless of which they will be, they will generate traffic, and systems need to be built to handle that traffic," says Lennart Nilsson.

He makes the comparison to mobile Internet in Japan, which attracted 15 million users in just the first year, and which grows at a rate of 75,000 users a day.

Henrika Lavonius-Norén

Internal manufacturing a natural safety valve

Radio expertise is one of Ericsson's critical success factors. That is why Ericsson Microelectronics is concentrating on the construction and internal manufacturing of radio circuits.

Good relations

Some industry observers have expressed concern that Ericsson, not selling as many telephones as Nokia, would be given lower priority by suppliers.

"It's true that some suppliers are forced to prioritize among their customers and consider who they want to work with over the next three or four years. Ericsson has good relationships with its suppliers. We're one of the major electronics buyers in the world and a leader in the development of mobile systems. Even though we're smaller than Nokia in terms of small component purchasing, we buy more large, expensive components on the systems side," says Bo Österberg.

Better price

"Ericsson is able to prioritize the construction and production of components so that they meet the needs of the company. We can manufacture products in areas where there are few suppliers – that increases our competitiveness and Ericsson receives a better price and increased delivery security."

"Moreover, we can efficiently de-

velop prototypes so that Ericsson enters markets in time. The company maintains invaluable expertise within the field of radio, by developing and manufacturing radio circuits ourselves," says Callmer.

Large volumes

Demand for components has continued to increase, keeping pace with the rapidly unfolding developments in the telecom industry.

Over the past two years, Ericsson Microelectronics' sales have increased by over 50 percent per year, and this year that increase could hit 70 percent.

Ericsson Microelectronics generates products in large volumes. Each and every day, all year long, more than a half million components are manufactured and delivered, most of them going to mobile phones and base stations.

Niche supplier

In today's telecom industry, more or less all suppliers have staked out their respective niche.

Ericsson Microelectronics' specialty is integrated circuits on silicon for radio applications, and modules for radio, frequency, optical and power supply.

All of Ericsson's base stations and telephones include circuits manufactured by Ericsson Microelectronics.

Two-pronged strategy

In order to handle growing demand, the company will increase its own production by both reducing the size of circuits and increasing the size of the silicon wafers. Increased reliance on a subcontractor for the manufacturing of silicon wafers will also be used.

Today, two-thirds of all Ericsson Microelectronics products are sold within Ericsson, and one third to other suppliers of telecom systems.

Ericsson Microelectronics fulfills approximately 10 percent of Ericsson's overall needs for components within the technology field/area.

Ulrika Nybäck

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China buys large IP backbone

» Ericsson has signed a contract with China Mobile for construction of the country's first packet-data-based IP backbone network. It will be the largest IP backbone network Ericsson has ever built in China, and the country's first nationwide IP backbone network.

The network will serve as a foundation for the transition to both GPRS and 3G mobile systems, which will provide subscribers high-speed data services such as multimedia. The network will be completed by October of this year.

Safer boating with positioning

» "YachtPosition – Close to You," is the name of the unique automated GSM positioning system for boats that Ericsson has developed in conjunction with Teli and MobilePosition.

The service, based on Ericsson's Mobile Positioning System (MPS), is available to Teli's mobile phone customers who subscribe to DOF. Sweden is the first country in the world to offer automatic positioning for boats.

The system will give boat owners access to local information, such as the location of the nearest harbor is, as well as local weather. It is also possible to track a boat's course on land using a PC and an Internet connection.

Italy chooses Ericsson for 3G

» Three of the seven operators competing for 3G licenses in the Italian market have selected Ericsson as their future supplier. Their decision was made long before the distribution of the five licenses. Submission of written bids will occur in October.

The three operators are WIND Italy, Telecom Italia Mobile (TIM), and Andala Hutchison. The first two are already GSM operators. TIM is the largest operator in Italy with over 17 million subscribers.

Wind River to use Bluetooth

» Ericsson has signed a contract with the American firm Wind River. The contract will result in Bluetooth being integrated into the company's software products. Wind River is a world leader in the development of operating systems that control so-called smart products in real time.

Sales of Bluetooth are expected to get under way by the end of this year. Estimates of sales volumes through the year 2005 range from SEK 700 million, according to IDC, to SEK 2.1 billion, according to Merrill Lynch.

Large investment in Red Jade

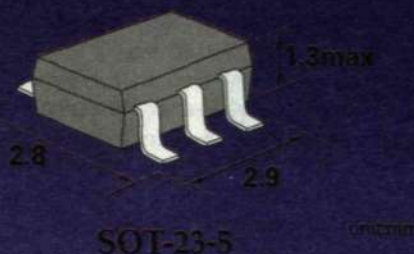
» Ericsson Business Innovation is investing USD 7 million in Red Jade, a California-based company that develops wireless entertainment products.

Red Jade will also receive support for everything from product design and development to marketing, manufacturing and distribution.

Another USD 3 million is being invested in Red Jade by the Swedish venture capital company, IT Provider.

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Equal opportunity good for business

Diversity and equality improve the bottom line. That was one of the messages conveyed by Ericsson Infotech when the business community gathered at a government-sponsored conference on equal opportunity recently.

"If we don't take advantage of differences and diversity, one of our competitors will," said Knut Evers, personnel manager at Ericsson Infotech in Karlstad, who spoke at the government-sponsored conference.

Ericsson was one of five Swedish companies invited to the conference by Sweden's Minister for Equality, Margareta Winberg, to give a presentation on its equal opportunity efforts.

Ericsson Infotech's equal opportunity work and philosophy reflect how the company as a whole views equality.

"Ericsson Infotech is a good example of how to work successfully for change locally. There is now a

FACTS/ERICSSON'S PARENTAL SALARY

Ericsson supplements the portion of salary that is lost during a limited time of one's parental leave. For an employee who earns SEK 28,000 a month, this would translate into SEK 6,387 in parental salary supplement for a one-month absence, in addition to the regular parental insurance that everyone is entitled to from the Swedish government. (The amount stated can vary depending on the company and workplace.)

conscious effort underway to convey their good example to other portions of the company, even though it isn't possible to copy every aspect of their program," says Göran Whitlock, head of equal opportunity issues at Ericsson.

Good example

Ericsson's most lauded initiative in the area of equality is the supplemental salary that Ericsson pays out to employees who take parental leave.

"I've frequently cited Ericsson's parental salary as a good example of initiatives that other companies can follow. Ericsson is demonstrating goal-oriented efforts," says Margareta Winberg.

Ericsson Infotech's business philosophy is all about creating balance.

"By striking a balance between men and women, young and old, work and recreation, and between company and individual, we are fostering better conditions for success in our business. At the crossroads between people of different skills and backgrounds, new ideas and work methods are generated which are better than any one individual could have accomplished," explains Knut Evers.

Eva Rosell, a county council

equal opportunities director, recommended that Ericsson Infotech be promoted as a good example at the governmental conference.

"Their attitude is to view employees as whole individuals and they have a good program," says Eva Rosell.

"It's easy to blame gender differences on levels of education, that women are unambitious, and so forth. But in order to increase gender equity, efforts at every level of society are required. That's why it is good to have companies that are willing to clean up their own acts and do as much as they can," she says.

More female managers

Putting more women into managerial positions is an important part of increasing gender equality. Ericsson in Karlstad has one of the company's few female presidents, Lena Larsson. Only 20 percent of managers at Ericsson are female, and 25 percent of Ericsson employees overall.

Knut Evers is not satisfied with those numbers, even though they are probably better than many other companies in the IT and telecom industries.

"We need to do better. Although we're seeing more female managers, progress is going slowly. It's an incredibly slow process," says Knut Evers.

In order to make the work environment attractive to women as well as men, the company is taking advantage of programs such as telecommuting, flextime, job sharing managerial positions, parental salary supplements, management development programs covering both female and

male issues, and skills development.

"We also have guidelines that say in cases where expertise and all other factors are equal, a position should go to the underrepresented gender in question," says Knut Evers.

Even on the political side, there is criticism about the number of women involved. From time to time, there have been proposals regarding obligatory female representation on boards of directors. That has received renewed attention now that it is clear that even the IT sector is dominated by men.

"From an equal opportunities perspective, this year's candidates to board of directors did not involve any significant improvements. And even though there are now more female presidents among listed companies I become impatient and believe that not enough is happening," says Margareta Winberg.

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FACTS/PERSONNEL PHILOSOPHY

All employees shall have equal opportunities. The company shall respect the individual and not discriminate in any way with regards to race, age, gender, skin color, religion, political views, nationality, trade union membership or social background. Ericsson strives to attain diversity and therefore focuses on creating a greater balance between the sexes in leadership positions, in addition to recruiting managers with diverse personal and professional backgrounds.

HELLO THERE...



Hilde Hedman

...who was recently appointed head of manufacturing at Ericsson Radio System's plant in Nynäshamn.

What sort of background do you have and how long have you worked at Ericsson?

I am an engineer, originally from the Netherlands, and now live in Nynäshamn with my family. I've worked at Ericsson for ten years but never in my home country. I worked for seven years at Ericsson Telecom, where I was involved in design and worked as a project manager. One of our projects was in conjunction with Ericsson Microwave Systems and the MINI-LINK BAS product. I have also worked at what was then the Elmetel development company.

Now that I'm working in production, I benefit greatly from my design experience. It allows me to understand how and why problems occur when manufacturing of new products begins.

How many employees does the Nynäshamn plant have and what do you produce?

There are approximately 800 full-time employees. Of those, 540 are involved in production. Our primary area of manufacturing is antenna products (ANP). Among other things, we make combiners and tower amplifiers for mobile data and telephony systems. We also work with WCDMA, which supports multimedia service and broadband. The plant specializes in taking in new ANP products and industrializing them. We are also involved in some mass production. This is essential for us to be able to industrialize in the best possible manner.

What does the head of manufacturing do?

I split my time among our system workshops. Other important tasks include planning and setting production forecasts. It is enjoyable work and different from my previous job assignments with design. Manufacturing has undergone an almost unique streamlining process and the pace is always fast here in the plant. That suits me perfectly since I like speed and action. Contact with people is the most fun part of my job.

Do you work long hours?

Yes, that happens frequently, but we have solved that by having my husband work part-time. We have two children, five and seven years old. When I was on parental leave, my husband was free to pursue his job wholeheartedly, and now it is my turn to do so.

Gunilla Tamm

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Ericsson key to mobile Internet development

"In order for mobile Internet to become a mass-market product, every mobile phone will require its own IP address," says Mike Roberts, head of the industry organization ICANN. Roberts, who recently paid a visit to Ericsson, oversees many infrastructure issues pertaining to the Internet.

"One of the biggest challenges we're now facing, with such rapid Internet growth, is to ensure that there are enough IP addresses, as well as poli-

cies and rules regarding domain

names," says Mike Roberts, when he was briefed on Ericsson's strategies and visions regarding mobile Internet.

Mike Roberts is the head of ICANN (Internet Corporation for Assigned Names and Numbers), whose work largely consists of ensuring that there are IP

addresses and to oversee the administration of top-level domain names, such as .se or .com.

ICANN is also responsible for so-called root servers, which are needed for the Internet to operate.

"By the end of 2003, there will be more users connecting to the Internet via mobile terminals than through the fixed network. This will change the essential nature of the Internet and Ericsson will play a leading role," says Östen Frånberg at Ericsson's corporate headquarters.

An important question that was

discussed involved access to IP addresses, used to send data packets to the appropriate recipient. With mobile Internet, a whole host of different mobile terminals will connect to the Internet. In order for that to happen, they will each need to have their own IP address, which will require a new protocol, IPv6.

During his visit, Mike Roberts was informed about Ericsson's solutions for how this transition will work.

Nils Sundström



Mike Roberts

Control your home with a phone

Ericsson's new e-services system is expanding the number of broadband services available. Customers can connect their stereo to the Internet, let up to five family members surf the Web simultaneously.

The new e-service also allows users to direct and monitor appliances in the home via WAP and the Internet.

Sweden's largest supplier of broadband services to consumers, com.hem, has signed an agreement with Ericsson to utilize its new e-services system, creating new broadband services for its customers. Initially, the contract will include around 3,000 broadband subscribers who will be able to test out the new services starting in October.

The goal of com.hem is to offer these services to all of its 1.3 million customers, starting in 2001.

Ericsson's e-services system offers an open application platform based on the global standard OSGL. The solution also increases protection against unauthorized computer access in the home.

Nils Sundström



With com.hem's broadband services, you can control your home using a WAP phone.

Photo: Martin Bogren

Lack of interest in 3G licenses

» Indications are that Austria will be unable to duplicate the incredibly profitable 3G license auctions held in Germany and the UK earlier this year. A total of six licenses will be awarded and as yet there are only six bidders.

The following companies have registered for the auction, to be held November 6-10: Mobilkom Austria, Max.mobil, Connect Austria, Tele.ring, European Telecom International and Hutchison Austria. The first four already have operations in Austria. Twelve frequency blocks will be auctioned off, and bids must be for at least two or three blocks.

Utfors to offer free telephony

» Effective October 1, Nordic companies that are customers of Utfors will be able to place phone calls to one another for free. The reasoning behind this strategy is Utfors' prediction that ordinary telephony will constitute a much smaller share of overall traffic in the future.

"Many telephone operators base their revenues largely on the per minute fees they charge. It will be difficult for them to match our offer, since our costs for transmitting telephone calls are significantly less than theirs," says Markus Boberg, information manager at Utfors, to Computer Sweden.

Lycos acquires Spray's portal

» Spray Ventures and Investor have abandoned plans to go public with their portal operation, Spray Networks. Instead, Lycos Europe is acquiring the Internet portal for the equivalent of SEK 5.6 billion in shares.

Lycos Europe is jointly held by the American firm Lycos and Germany's Bertelsmann.

Although Spray's coffers are almost empty, President Per Bystedt denies that it is the reason for the sale.

Listen to e-mail over the phone

» A new system allows European customers to listen to their e-mail via their phone's voicemail service. Text is converted to speech and the system can recognize and read both Swedish and English e-mail messages. All that is required is a mobile phone or an ordinary touch-tone phone, together with Eurovoice Pro, a service that collects the customer's messages. The text to speech service is available, at no additional cost, to all Eurovoice customers.

Vodafone invests in small companies

» British mobile telephone giant Vodafone have announced plans to start a venture capital company for investments within the area of mobile Internet.

The new company, named Vodafone Ventures, will administer funds of 100 million pounds, almost 160 million dollars. Investments will be made of between 3 and 5 million dollars, and will focus on smaller companies.

Vodafone are to cooperate with the investment bank Goldman Sachs in funding the new venture capital company.

3G negotiations in

In Germany, 3G is a burning issue being debated in all media. The government is mediating in disputes about how the license fees should be distributed, and newspapers are reminding their readers that a roof can be worth up to DEM 100,000, because operators will now need new sites for antenna installations. All six operators are also engaged in negotiations with telecom suppliers.

The 3G license auction resulted in a significant contribution to the German government's coffers of no less than SEK 422 billion. Four established operators, Mannesmann Mobilfunk, T-Mobile, E-Plus Hutchison and Viag Interkom, plus two newcomers, Mobilkom Multimedia and Group 3G, each placed winning bids for 3G licenses at the end of August.

Contributing to the high cost of licenses was the fact that Mannesmann Mobilfunk and T-Mobile, which were both bidding to obtain three frequency blocks, drove up the bids. Björn Eisner, key account manager for Mannesmann at Ericsson in Germany, comments on the intensifying competition.

"The current competitive situation with two new operators entering the market, entails a risk that some operators may not survive."



Björn Eisner

First contracts in October

Negotiations between operators and telecom suppliers are now entering an intensive phase. The first contracts are expected to be signed in October. By year-end, all operators will have chosen suppliers. Ericsson, Nortel, Siemens and Nokia are the favorites, according to industry experts.

Telecom analysts expect that it will take established operators from five to eight years to realize a return on the investment and even longer for the newcomers. Bernd Schmidt, marketing manager for Mannesmann at Ericsson in Germany agrees.

"It could take even longer, based on the information that we have seen," he says.

First mover advantage

Operators that wish to win the support of customers will have to build their 3G networks quickly and provide good national coverage. They will also have to launch exciting new services as quickly as possible and at competitive prices. In addition, the services must be easy to use.

For Ericsson, as well as Nokia, Siemens and Nortel, which are the company's principal competitors in this segment, these are busy times. Ericsson is now in negotiations with all six operators and expects to sign the first contracts in October.

Ericsson's objective in Germany is the same as for the total 3G market: at least a 50 percent market share.

"Winning less than three contracts I would consider a total failure," says Björn Eisner.

Mobilizing resources

Ericsson's local company in Germany is mobilizing all resources to complete negotiations and preparations prior to delivery. More than 70 percent of the company's 2,300 employees are now working with 3G systems in various capacities.

"Even though 3G is being given the highest priority, we must not forget that GSM is still extremely important and that Ericsson is constantly working on new versions so that the migration to GPRS and 3G will be as smooth as possible. After all, GSM is still our bread and butter," emphasizes Bernd Schmidt.

If the local company achieves its goal of being chosen as supplier by three operators, there will be hard work ahead. The German company is therefore forced to recruit new employees and to borrow resources from other Ericsson units. Even though the 3G networks are intelligent and should be easier to construct than previous mobile systems, one must be prepared for a few initial bugs.

What will be time-consuming in the start-up phase is obtaining building permits for the new sites, that is, locations for the installation of antennas and base stations.

Merger an advantage

Working with Mannesmann has become easier since its merger with the British operator Vodafone. Product planning, resource allocation and collaboration with a number of processes are examples of how work has been simplified, according to Bernd Schmidt.

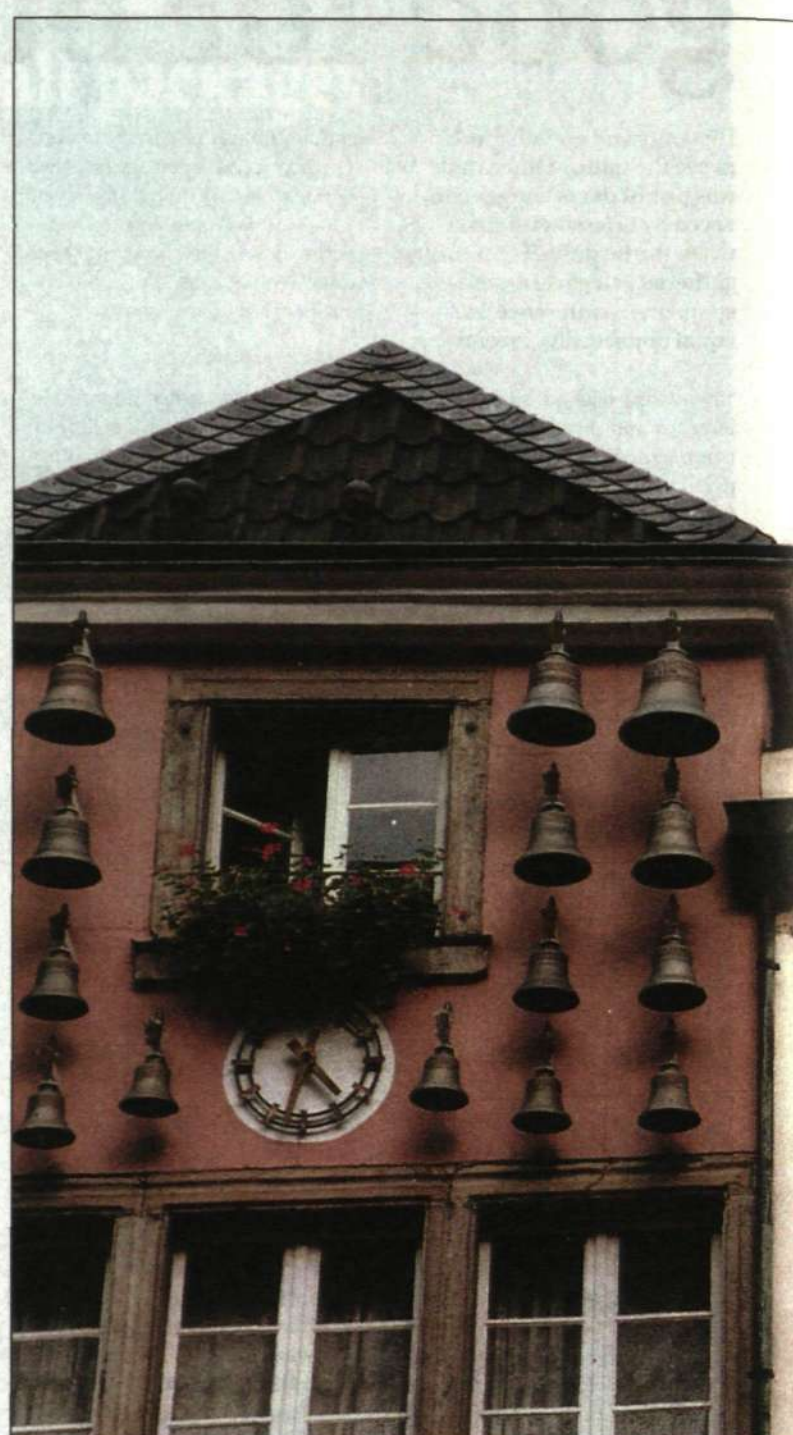
Mannesmann is not only one of Ericsson's largest customers, but also a demanding one.

"Our partnership functions smoothly. Amidst all the 3G stress, we have already begun to discuss functionality and services for fourth generation systems," says Björn Eisner with a secretive smile.



Bernd Högberg

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Germany intensify

Strategies differ among operators

Germany's largest mobile phone operator, T-Mobile, has adopted a 3G network strategy that involves quickly providing coverage over a large area and being the first to offer services. Newcomer Group 3G, on the other hand, plans to lease out its frequency spectrum.

"Owning network capacity and frequency spectrum are like owning oil, you can resell it at a premium to someone else," explains Jyrki Karasvirda, press spokesperson at Group 3G. Finnish operator Sonera is the majority owner of Group 3G.

Group 3G is currently expanding its operations in Germany and has no subscribers as of yet. They plan to launch 3G services in 2002.

Different strategies

T-Mobile, a subsidiary of Deutsche Telekom, has a different marketing strategy. The operator wants to maintain and expand its already large customer base by offering more, better and above all, faster services. The operator currently has 15.4 million subscribers in Germany.

"We don't think that there will be a price war - services won't be much more expensive than they are now. Germany is a price-sensitive market," says Philipp Schindera, head of media relations at T-Mobile.

T-Mobile plans to launch GPRS services starting in November. The company will charge according to the amount of data transmitted, a model that Schindera believes will also work for 3G services.

Higher data transfer rates

Video conferencing and downloading short video clips are examples of services that T-Mobile believes will be in heavy demand once network data transmission rates increase to speeds of up to two megabits per second. Conversely, Group 3G does not believe there will be any dramatic change in service offerings.

"I don't think services will change that much. The primary difference will be an increase in speeds allowing you, for example, to see the people you are talking to," says Jyrki Karasvirda.

Ulrika Nybäck

Want to make some extra money? The operators who recently won 3G licenses in Germany are in desperate need of sites for the installation of antennas and base stations and are reported to be offering up to DEM 100,000 for strategic locations, such as roofs or fields.

Photo: Ulrika Nybäck

FACTS/MANNESMANN IN GERMANY

- Is one of Ericsson's largest customers.
- Has a total of 16 million mobile subscribers.
- 80 percent of the radio components in their GSM network carry the Ericsson brand name.
- This year, the company has purchased some 200 Ericsson mobile switches for GSM.
- Plans to launch 3G services in 2002.



GPRS contracts were lost, but Ericsson in Germany is now determined to win at least three of six 3G contracts. Björn Eisner and Bernd Schmidt, who are key account and marketing managers for Mannesmann, believe that Ericsson's chances are excellent.

Hutchison eyes global market

In our series on large and small Ericsson customers, the turn has come to Hong Kong-based Hutchison Whampoa. Contact talked with Ericsson's account executive for this conglomerate, in which telecom is just one of several areas of operations.

Management of ports and toll roads in China. Hotel operations, oil production, retail chains and telecom. Hutchison Whampoa undeniably has many different businesses in its portfolio. The conglomerate's largest owner is Li Ka Shing, one of Asia's most legendary businessmen.

"Outside Southeast Asia, however, Hutchison is best known for telecom, primarily through the 3G license that the company won in Great Britain," says Kinson Loo, who

was recently appointed Global Account Executive for Hutchison.

Telecom is clearly a global business for Hutchison, which has ownership stakes in operators in Israel, India, Australia and North America, as well as a number of countries in Southeast Asia.

Hutchison was previously the owner of Orange in Great Britain, but the company was sold to Mannesmann, which has since sold it to France Telecom.

German-American deal

"Hong Kong is Hutchison's most important home market," says Kinson Loo. "They own the largest operator together with NTT DoCoMo and Motorola, which also supplies infrastructure."

Voicestream is the largest GSM operator in the US. Hutchison was

one of the largest owners until this summer, when its share was sold to Deutsche Telekom. Ericsson is a small supplier to Hutchison. The first breakthrough took place in Israel, but Ericsson has since sold equipment in India.

Developed relationship

Hutchison has potential, however, perhaps even great potential, believes Brian Cakebread, Ericsson's global account manager for Hutchison.

"We are confident in Hutchison's global strategy, particularly with respect to 3G," he says adding, however, that Hutchison is not like other operators.

"Hutchison is not in the telecom business because it has always been in the business, but rather because it is profitable," says Brian Cakebread.

"They have a reputation for being astute businessmen, which was why they bailed out of the German 3G auction. They no longer considered the license to be good business."

A somewhat more developed relationship with Ericsson has been started through a joint venture with Hutchison and the Swedish company Investor.

Global strategy can change

The joint venture is called imGo and will invest in such areas as mobile Internet.

Against this background, it is not surprising that Hutchison and Investor submitted a joint application in the beauty contest now in progress for Swedish 3G licenses.

Brian Cakebread also believes that Hutchison is in the process of changing its global strategy and that

this could be to Ericsson's advantage.

"Previously, Hutchison's telecom assets have been somewhat fragmented, with small ownership shares in other operators. But it is now clear Hutchison is aiming to become a global player, particularly in the 3G market," concludes Brian Cakebread.

Kinson Loo adds, "Ericsson's establishment of a global customer account positions the company well to become a strong partner for Hutchison."



Kinson Loo

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Sending images and SMS over mobile phones are popular services in the Asian market. But who could have known that an integrated dictionary in a mobile phone would also be a much-desired service? Cyberlab in Singapore is Ericsson's ear to the Asian world, both in terms of regional and generational trends. Singapore also has nearly full mobile coverage, so what would be a more appropriate setting for Ericsson's competence center for indoor solutions than this pulsating city-state?

A hothouse for trends

Many teenagers find that mobile phones provide greater flexibility and more fun in their lives. This is equally true in Asia, where Contact met Stephanie Yue and Sean Koh, two young Singaporeans who were eager to relate how mobile phones have changed their lives.

► Our talk takes place at a café by the Singapore River, which runs through the center of Singapore. There are many restaurants and cafés in this district in which skyscrapers housing both offices and shopping malls line the streets. Although the glass towers gleam proudly in the evening sun, the street where we are sitting is unusually quiet.

Elsewhere, the pulse of the city is more intense, as businessmen and women dressed in suits by Gucci, Escada and Armani scurry along the busy sidewalks on the way to their next meeting, accompanied by the roar of the shining new cars that fill the streets.

Sean Koh and Stephanie Yue are both 15 and have just had a four-week summer vacation. This was far too little, in their view, a sentiment that seems to be shared by teenagers everywhere. When we meet, Sean and Stephanie are using two of Ericsson's somewhat older phones, the 768 and the 628.

"The best thing about a mobile phone is that you don't have to make definite plans anymore about when to meet, for example," says Sean.

Off-limits in the classroom

Stephanie agrees that mobile phones make life simpler but admits that they have become somewhat of a status symbol among both friends their own age and with adults. Although mobile phones are prohibited during school hours, it still happens that a phone rings in the middle of a class.

"The teacher usually confiscates the phone until the class is finished or school is over for the day," relates Stephanie.

Mobile phones are popular among Stephanie and Sean's classmates. Out of 43 students, about a third have their own phone. Both teenagers like to send SMS messages, which they find an

easy, efficient and relatively inexpensive means of keeping in touch. Short message services are popular throughout Asia, making them a gold mine for operators. The Philippines top the list with an average of 17 SMS messages per subscriber per day.

"Currently, we send SMS messages in English, but we are looking forward to the day when we can use Chinese, which is our native language," says Sean.

This is naturally a reasonable desire, and a project at CyberLab in Singapore is focusing on how Chinese characters can be entered on a mobile phone. English, which is one of the official languages of Singapore, is spoken by nearly everyone, but the second-largest language is Chinese. As a country, Singapore is a melting pot of different cultures, with a population consisting of Chinese, Malays, Indians, Japanese and Europeans.

WAP phone object of desire

If money were no object, Sean would buy an Ericsson WAP phone or one of Nokia's latest models. Playing games, downloading and listening to music, and chatting on the Internet are services that he would like to have on his phone. As technology advances, they both look forward to being able to view film clips on their phones and see the person with whom they are talking.

When Sean and Stephanie are not studying, they share the same interests as other teenagers around the world. They enjoy chatting with friends around the world, playing computer games and listening to music.

"Britney Spears and Lene Marlin are my favorites," concludes Stephanie.



Sean Koh and Stephanie Yue relax in a café by the Singapore River. They would prefer to send SMS messages in Chinese, their native language – a service currently under development at Ericsson's CyberLab in Singapore.

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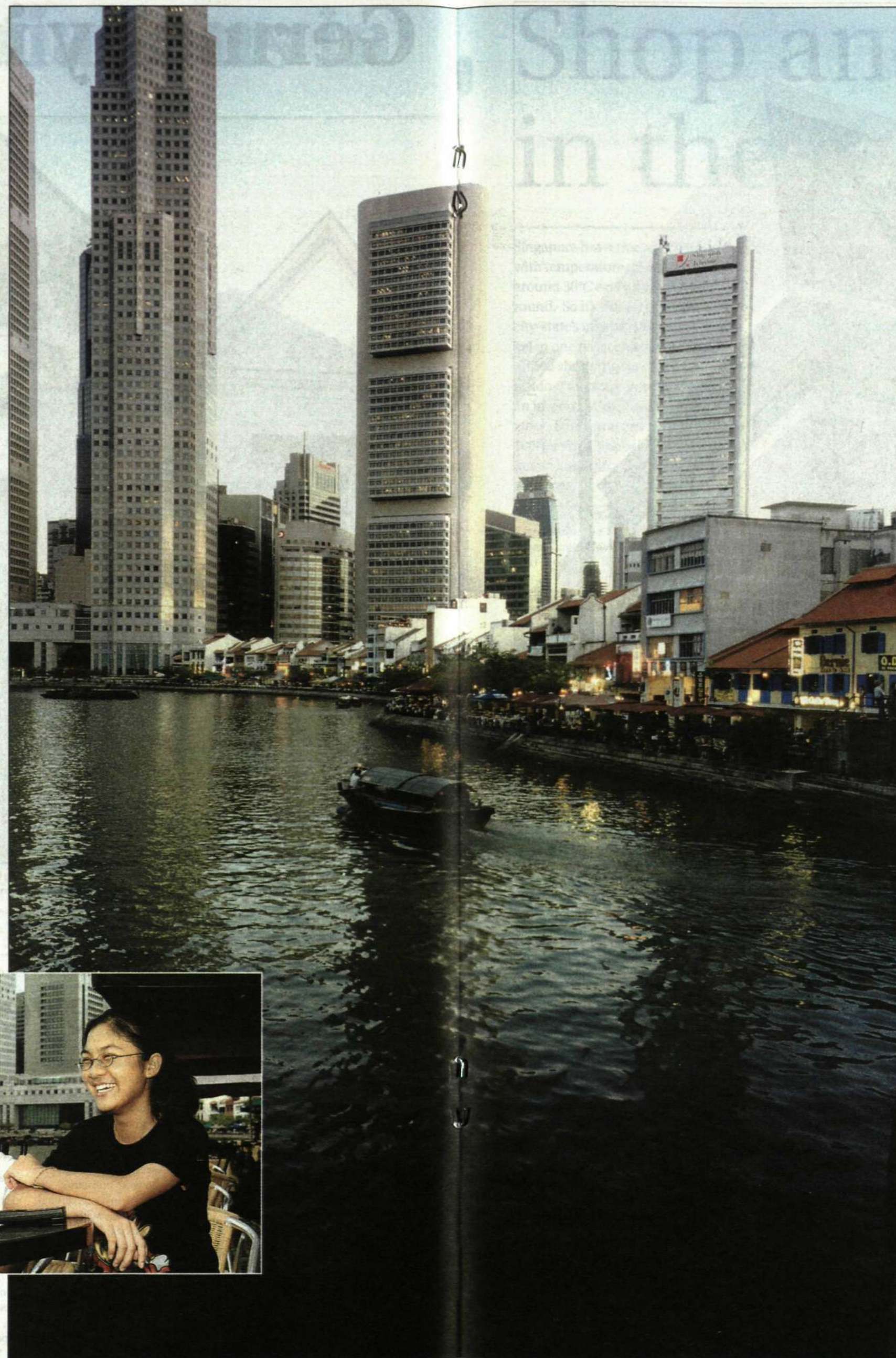


Photo: Lars Åström

FACTS/SINGAPORE IN BRIEF

Form of government: Republic. Declared independent from Malaysia in 1965.

Population: 3,531,600 (1999)

Population groups: Chinese (76.4%), Malay (14.9%), Indian (6.4%), other (2.3%)

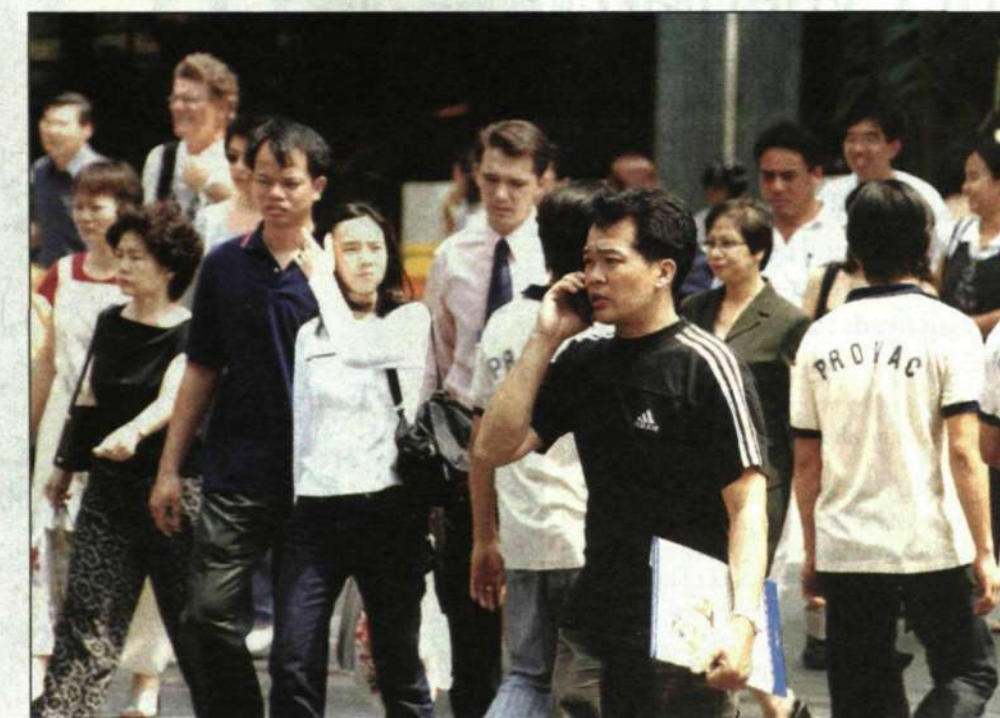
Religions: Buddhism, Islam, Christianity and Hindu

Languages: English, Chinese, Malay and Tamil

Largest export: Computers and software, telecom equipment, rubber and rubber products

Unemployment: 3.5% (2000)

Mobile phone penetration: 1.8 million



The majority of Singaporeans live in cramped quarters, so mobile phones help create a kind of "free zone" and are a way to pass time. If Ericsson's Buddy Sync project becomes reality, communication between friends will be even simpler.

Buddy Sync keeps tabs on friends

Feel like taking in a movie and wonder if your friends want to join you?

Key in a message on your mobile phone, use a chat service to discuss the choices and hold a vote on which film to see. This is the Buddy Sync research project, which is all about social interaction.

► The name Buddy Sync speaks for itself. The services that allow users to synchronize with their friends are about keeping track of people, knowing how they feel, getting their opinions on various subjects and finding out if they feel like talking right now.

The Buddy Sync services are designed to encourage users to be spontaneous and to express their personalities. Entertainment plays a central role. Many of the services that Sean Koh and Stephanie Yue are hoping to see in the future are included in the system, which consists of a number of wireless services that are primarily aimed at young people between the ages of 13 and 17.

The Buddy Sync project is currently in the evaluation phase. The next step will be to include the Buddy Sync software in mobile phones and handheld computers, but that is a decision that must be made by Ericsson in Lund.

In-depth interviews

Gareth Loudon, project manager for Buddy Sync at CyberLab in Singapore, hopes that the service will be turned into a commercial solution for the general public as soon as the first commercial GPRS networks are taken into operation. The first GPRS network is already operating on a small scale in Hong Kong. Several more networks will be taken into operation in Asia and Europe next year.

"We had a meeting at CyberLab at which we tossed around new ideas," says Gareth, recalling how the idea for Buddy Sync was born. "We hy-

pothesized as to what would be the services of tomorrow. Developing the basic concept only took a few days, but it was important for us to get input from teenagers as quickly as possible before proceeding."

A pre-study was conducted based on in-depth interviews with teenagers in Singapore, Great Britain, Japan and California. These interviews produced some exciting results.

For example, Japanese teenagers liked the idea of always being reachable; being able to receive calls or SMS messages at any time of the day is important to them.

"Most Japanese have very cramped living quarters. For them, the mobile phone or handheld computer becomes a kind of free zone, as well as providing a means of passing the time while stuck in traffic or riding the bus," explains Gareth Loudon.

Private issue

In the US, both teenagers and adults have a different relationship to their mobile phones. Talking on the phone while riding the bus or shopping in a store, for example, is not self-evident. Phone calls are something private, and American teenagers were therefore more interested in the ability to choose when they wanted to be available.

The overall results showed that all services except the polling function were popular among the teenagers interviewed. Games and the ability to download music were also popular services among those interviewed and were later included by CyberLab.

Now all that's left to find out after the surveys have been thoroughly evaluated is whether Buddy Sync will become Ericsson's next best-seller.

Ulrika Nybäck

Footnote: GPRS is a technology that allows packet data to be sent over the circuit-switched GSM network.

Spotting the trends decisive for CyberLab

Understanding – that's what it's all about. Not until those who work at Ericsson's CyberLab in Singapore understand how teenagers and Chinese think and live, can they find Ericsson's next best-seller. Frank Reichert heads the CyberLab operations.

What is unique about the CyberLab in Singapore?

We are trying to determine what kinds of services and products our target groups will demand in two to three years. Since our target groups are mainly teenagers and Chinese, it is a clear advantage to be located in Asia.

How can you know which products and solutions will be Ericsson's best sellers in three years?

We work with anthropologists to determine how our target groups live today and what kinds of products and services they want. By using focus groups and meeting industrial designers, we can develop concept products and services that are fun and easy to use. The results are later confirmed in market studies.

What area is hottest right now?

Our three largest projects are Buddy Sync, Wukong (a terminal and services especially adapted to the Chinese culture), and Delhipad (a handheld computer with various services).

What are CyberLab's objectives for the next two years?

We have started developing small terminals for 3G networks and security services for mobile networks. We will also begin collaborating with local operators in Singapore in order to test our new services and products.

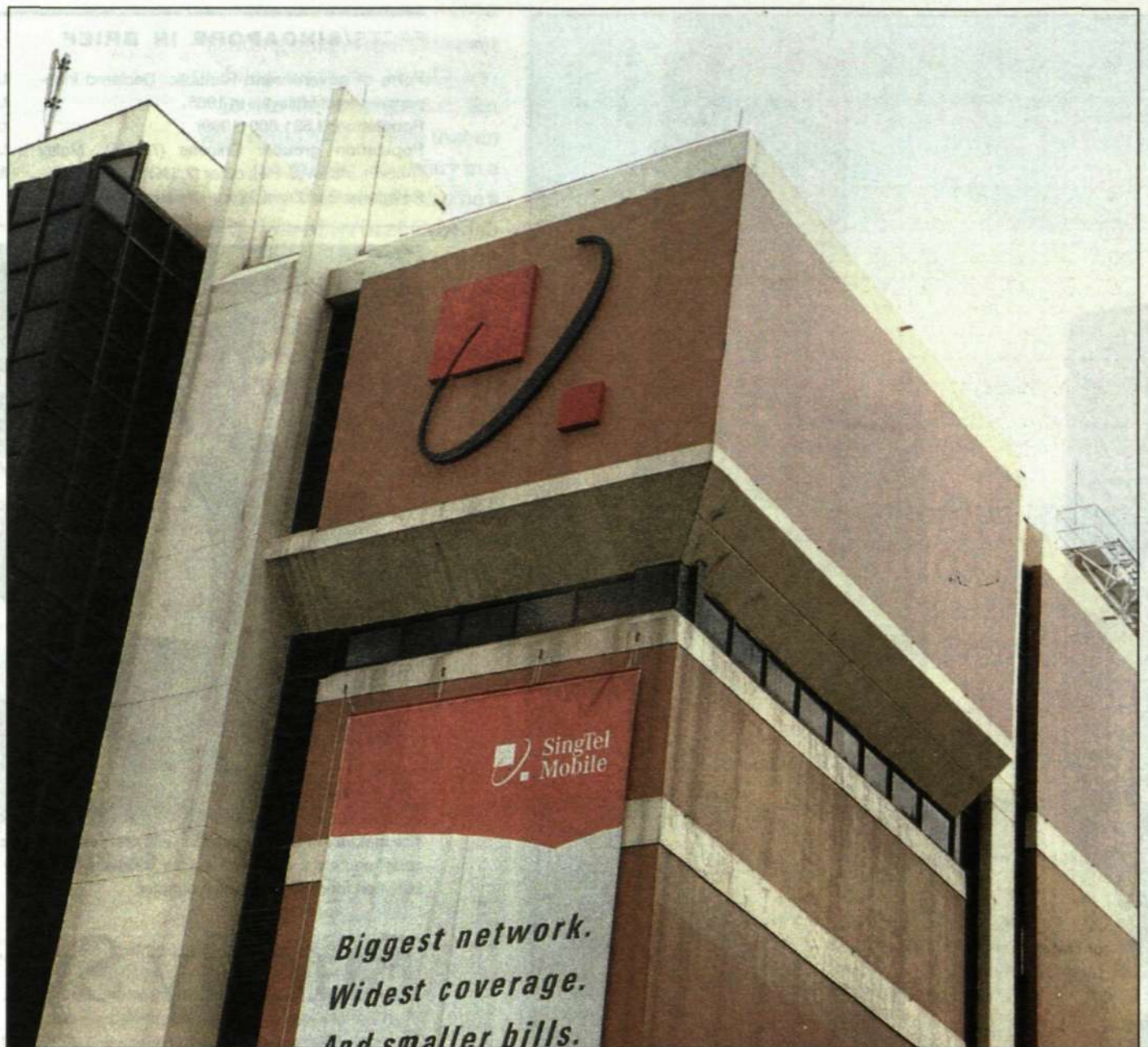
What is the best thing about your job?

The feeling of creating something new, the technical challenges and the satisfaction of developing services that help people communicate and have a better life.

Ulrika Nybäck



Frank Reichert likes his job in Singapore, spotting trends and develop concepts.



"The largest network. The widest coverage. And the least expensive." That's how SingTel, Singapore's leading operator, wants to profile itself.

Photo: Lars Åström

Best operator wants to better

SingTel was recently recognized as Singapore's best operator in a reader survey. Six months ago, the operator launched the first WAP services and soon, data speeds will be increased with GPRS and later 3G.

► "We are extremely proud," says Alan Ho, pointing to the framed diploma that hangs in the reception area in SingTel's offices. Alan Ho is the Ericsson account manager responsible for SingTel. The diploma in question was awarded by the trade magazine Telecom Asia's readers, who recently voted SingTel the region's best operator. Competitive pricing, a broad service offering and excellent products were the winning qualities emerging from the survey.



Alan Ho

Prepaid subscriptions

SingTel is also the country's largest operator, with 1.2 million mobile telephone subscribers. The operator offers both fixed and mobile tele-

phony, Internet access and a number of other telephone services and products. Target customers for SingTel's services are a broad group that includes both business professionals and teenagers.

For younger users, prepaid subscriptions, short message services (SMS) and free calling services sponsored by advertisers are popular products. Prepaid currently accounts for about 30 percent of all subscriptions. Services for those with bigger budgets include WAP, which is currently enabled for 40,000 subscribers.

"Banking services, stocks and financial information, news and a restaurant guide are the most popular WAP services right now," says Hui Weng Cheong, Vice President for consumer products at SingTel.

Strong competition

SingTel's main competitors are StarHub and M1. StarHub is a full service telecom operator that started operations in April this year and has about 120,000 mobile subscribers today. M1 is a mobile operator that started operations in April 1997 and has about 650,000 sub-

scribers. In April this year, the Singapore telecom market was fully liberalized, leading to the issuance of more than 60 operating licenses.

Licenses for third-generation mobile systems will be awarded by year-end. SingTel's goal is to offer 3G services by no later than 2002. How the licenses will be awarded has not yet been decided. IDA, the regulatory body, has hinted that it will be a combination of an auction and a beauty contest in which the operator's ability to quickly build out the network is taken into consideration.

Ulrika Nybäck

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FACTS/SINGTEL

- Singapore's largest full services telecommunications network operator
- 1.2 million mobile subscribers
- Ericsson customer since 1989
- GPRS services launched in February 2000
- Plans to introduce 3G services by 2002
- Foremost competitors are Star-Hub and M1



Hui Weng Cheong

Shop and chat in the cool indoors

Singapore has a tropical climate with temperatures that hover around 30°C every day, all year round. So it's not surprising that the city-state's inhabitants seek heat relief in one of the many air-conditioned shopping centers.

Indoor coverage has thus become an important issue for mobile operators. Singapore can boast nearly 100-percent indoor coverage today, due in large part to Ericsson's indoor solutions.

► Ericsson's In-Building Competence Center provides expertise on radio design, implementation, project management and marketing. Tony Sandberg is the center's marketing manager.

"Singapore is a forerunner when it comes to indoor coverage. Ericsson has therefore chosen to spread the know-how available here by supporting other companies in the region," he explains when we meet at the Ericsson office in Singapore, with a view of the greener and somewhat more tranquil parts of the city.



Tony Sandberg

Total solutions

Tony Sandberg continues, "Each shopping center and office building has business potential for a mobile operator, and thereby for us."

The In-Building Competence Center works to market the indoor concept in Asia and Australia. When a market unit receives an order, the center can provide support through measures such as resource planning, project management, radio design and installation. The units receive support in the initial phase of a project. Once the units have enough knowledge to take over themselves, the center's technicians and marketing people move on to the next project.

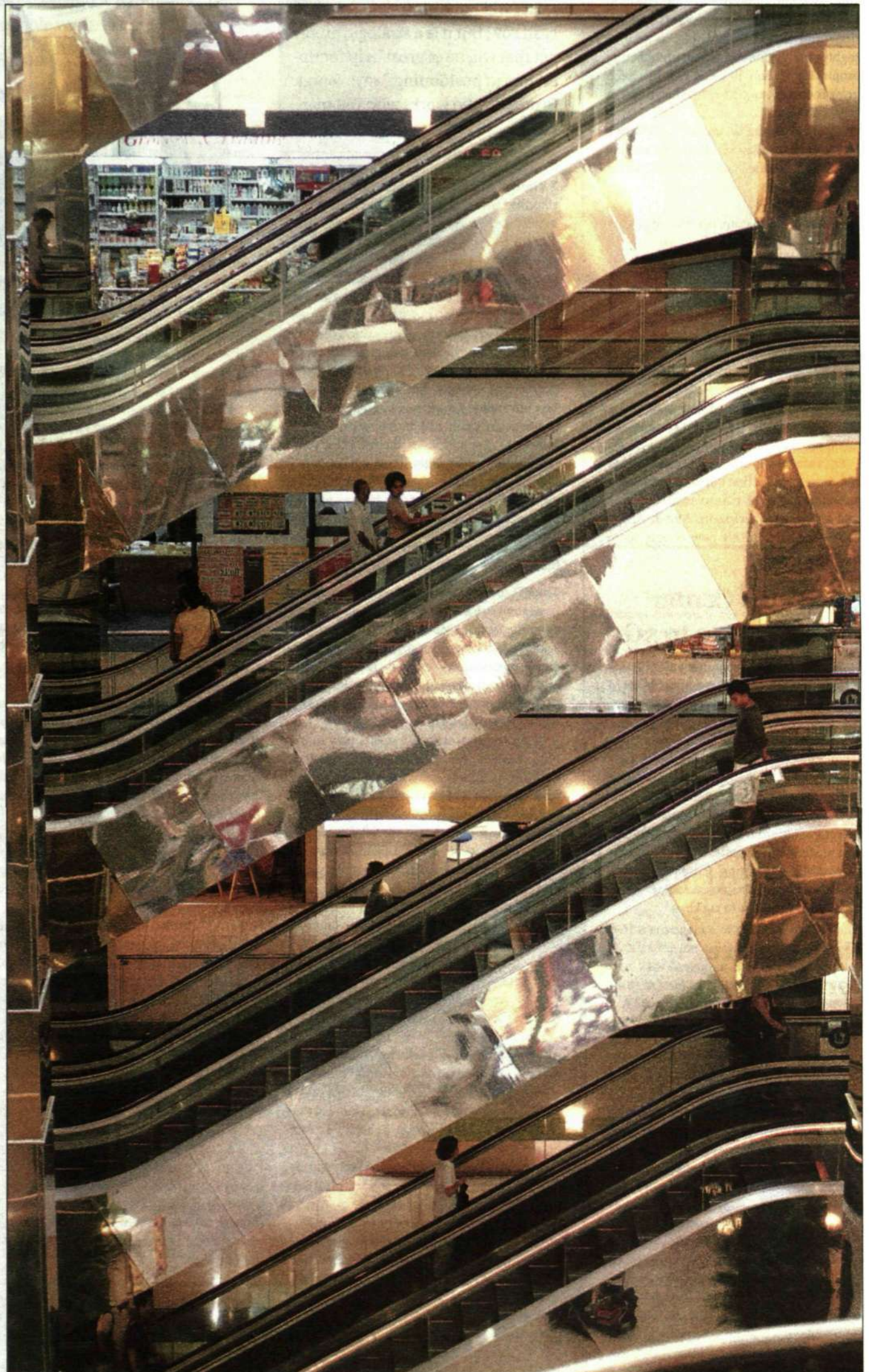
"Our strength is that we can deliver total solutions that encompass everything from training and radio design to hardware and implementation," according to Tony Sandberg.

Growing needs

As cities grow and an increasing number of people acquire mobile phones, the need for good indoor coverage solutions becomes apparent. The solutions are currently in high demand in Asia and Australia, with demand in the rest of the world steadily increasing.

Ericsson recently opened a second competence center in Guildford, outside London. The new center works with Ericsson companies in Europe, the Middle East and Africa, based on the same concept and organizational structure as in Singapore. In large cities, there is a shortage of frequencies and space is scarce.

"The next step is to begin selling a smaller base station with an extremely high capacity, which is now under development in Kista," concludes Tony Sandberg.



Shopping is a favorite pastime in Singapore and many shoppers use their mobile phones indoors. Mobile coverage in the country is nearly 100 percent and Ericsson's indoor mobile solutions can be found in more than 350 Singaporean buildings.

Photo: Lars Åström

New server platform for mobile Internet

Ericsson has developed an open server platform for the new horizontal architecture for the mobile Internet. The platform, which is called TSP (Tango Server Platform), provides the top two layers of the new architecture, which are the Service Networks/Applications and Control layers.

Ericsson has designed TSP to meet the stringent requirements of real-time services, reliable operation and high capacity. TSP has open interfaces towards applications and is linearly scalable, as well as highly reliable due to a cluster architecture employing loosely linked CPUs in which any processor can take over when another fails.

The first products based on TSP are a Home Location Register (HLR) for mobile networks and the Radio Network Server (RNS) for Edge.

www.ericsson.com/pressroom

GPRS gets a kick-start

By offering a complete solution for GPRS, from network to terminal, and by speeding up the introduction of the first GPRS phone (the R520 with Bluetooth and support for WAP 1.2.1), Ericsson is giving operators a chance to roll out commercial GPRS services quickly.

Ericsson has a unique position in that the company was first out with both infrastructure for GPRS, commercial terminals and applications. Ericsson's Mobile Application Initiative (MAI) now counts more than 800 members.

Solutions Center for cdmaOne to 3G

Ericsson recently opened a CDMA Solutions Center in San Diego in the heart of what is called Telecom Valley. At the center, new applications and hardware designs will be integrated, and Ericsson's operator customers and third-party partners will be able to experiment with new ideas.

The intention is to stimulate development and demonstrate the capabilities of cdmaOne according to the IS-95 standard and to show the migration path to broadband third-generation cdma2000 networks, which will double call capacity and increase data speeds to 144 kbps.

Renaissance for CDPD

CDPD (Cellular Digital Packet Data), the packet-data technology for the American TDMA standard, is undergoing a renaissance. Although CDPD is not a 3G technology, it is a stepping stone to Edge and the next generation. The technology, which has been around for several years, is mostly used in niche markets, such as telemetry, but is now being used for mass market services, such as e-mail and Web browsing. One of CDPD's strengths is that it can be installed very easily in existing TDMA networks to quickly provide data speeds up to 19.2 kbit/s, which is more than adequate for text communication. Ericsson's CDPD system is used by such operators as AT&T in the US and Telecom New Zealand.

Ericsson also recently introduced the world's first dual-mode CDPD/TDMA phone. Ericsson is also working on a CDPD solution for mobile positioning.

Pushing ahead

HOW ERICSSON LOCALIZED INTERNET (ELI) WORKS

Ericsson Localized Internet (ELI) is a new product within positioning developed by Ericsson Infotech in Karlstad (EIN).

"ELI will not be Ericsson's next cash cow, but it is a strategic product that will be of great help for operators in positioning," says Morgan Brunzell, who works with ELI marketing.

The combination of mobile Internet and positioning, meaning the ability to determine the user's location via the mobile phone, creates opportunities for new services. This trend is also being strengthened by the fact that the mobile Internet creates openings for service providers to which operators are unaccustomed.

ELI consists of a server application that is located between the end user and the service provider. End users see ELI as an interface to positioning services from various suppliers. The advantage for service suppliers is that it provides an open API (Application Program Interface) that simplifies the interface to the mobile network's positioning function.

"This also makes it easier for operators to link in other service providers instead of building a separate solution for every new supplier," says Morgan Brunzell.

Success for MPS

The ELI server application is linked to another important Ericsson product called Mobile Positioning System (MPS).

While MPS can position end users, ELI creates a platform for services and applications and is thus an application-enabler. Put simply, ELI provides a link between MPS and the service provider's database.

"MPS together with ELI opens new market opportunities for location-based services," says Karin Carlsson, who works at the Internet Applications business unit in Kista.

A hint of the possibilities offered by positioning is provided by the Michelin Travel Services application that Ericsson uses for demonstrations. (See Contact 12/2000, page 23.)

This service, which is called Guide@Michelin, works with MPS and ELI to position the user so that he or she can get from point A to point B. With a third application called LBIS, map information can also be transmitted.

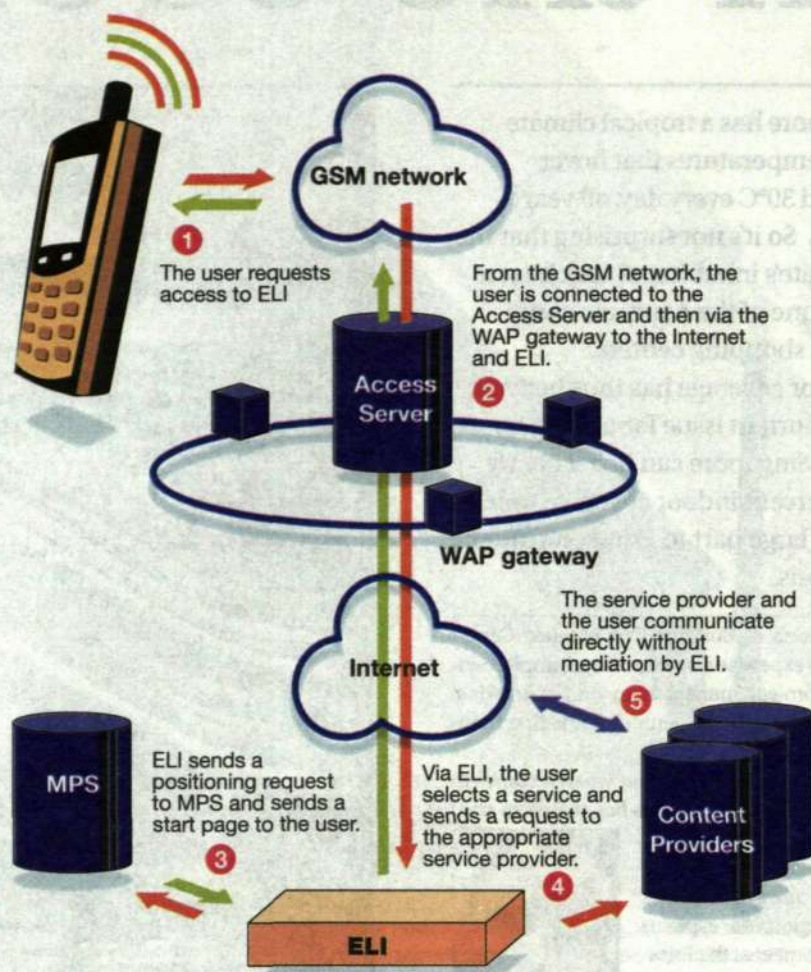
"LBIS was designed around MPS and ELI. It is a pure electronic map service," says Karin Carlsson.

"The application works by giving the end user a map with a route description that is sent directly to the mobile terminal, which could be an Ericsson R380, for example. The route description can also be sent as text," explains Karin Carlsson.

Ericsson also markets LBIS, which was developed by the Dutch company Palmtop Software. Positioning applications are sold separately, but the intention is to put all positioning products together in an integrated package.

The breadth that Ericsson has achieved in positioning is the result of many recent activities, initiated primarily by the group behind the commercialization of MPS. The group has already developed services such as the iPulse Locator. (See Contact's Technical Supplement, June 2000.)

Ericsson's competitors are also active. Nokia has forged an alliance with Cellpoint to devel-



Instead of end users accessing the service provider's service via the mobile Internet, an interface is provided that allows operators to customize a positioning services offering. This means that the operator can move up the value chain, thus creating greater revenue opportunities.

Illustration: Martin Gradén

op a system similar to MPS that will also support the MPP 3.0 protocol. The Mobile Positioning Protocol is already used by Ericsson in MPS, and it is hoped that it will become a global positioning standard as a result of work now in progress within ETSI, the European Telecommunications Standards Institute.

September launch

ELI 1.1 has not yet been sold to any operator but will be launched in earnest during September.

Morgan Brunzell, who is working to introduce the product package at Ericsson's local companies in Europe and Asia, reports that reception among operators has been positive.

"Most operators are aware that they cannot produce their own positioning services in competition with the many service providers already on the Internet," says Morgan Brunzell. "They therefore see a competitive advantage and new revenue opportunities with an application like ELI, at least over the short term."

"Another advantage of ELI is that the knowledge of the end user's location remains with the operator. This protects the end user's integrity, while allowing the operator to use data mining to package and sell information about the end user without compromising the user's integrity."

Functions for data mining, as well as greater freedom for end users will be included in version 2.0 of ELI, which will be released in the first quarter of next year.

ELI was developed by Ericsson Infotech in Karlstad at the request of the product owner ERA/AV in Kista. Development work took less than a year. At the design center where the product was developed, 15 persons worked a total of eight months.

"The roll-out of version 1.0 took place last spring, but we hardly got started selling it before version 1.1 was released," says Magnus Windhede, strategic product director for ELI.

Magnus believes that Ericsson's corporate TTC Global (Time to Customer) has been a great help in development work.

"The Flow Control center in Linköping in particular did an excellent job. We received help in specifying requirements for third-party suppliers, which was a more difficult and complicated task than we had anticipated. Now that the TTC resources are secured, what remains for me and my product group to do is to find more people with the right skills within the company so the TTM (Time to Market) can also be optimized," concludes Magnus Windhede.

Mats Lundström

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FACTS/ERICSSON LOCALIZED INTERNET

ELI consist of a Sun Enterprise computer with the Unix-based Solaris operating system.

In addition to ELI, third-party products consisting of a Sybase database and the IBM Websphere web server are installed. ELI was developed with PureJava, which makes it platform-independent.

ELI can therefore be run on both Linux and Windows NT, if the operator so chooses.

Smart broadband box helps users pick services

"Broadband will really start to get exciting when the Internet can offer more services," is the usual comment when broadband is mentioned. IP telephony is one of the services that many people want. Ericsson's new product Residential Gateway (DRG) is a little box that makes broadband services more exciting.

► Put simply, Ericsson's Residential Gateway combines an Ethernet switch, a firewall and a gateway for IP telephony. Initially, the idea is that the Residential Gateway will be used as customer-premises equipment in Ethernet-based broadband networks. The product has been developed within Residential Communication Services as part of Ericsson's broadband concept Local Community Services, but it can also be used as an independent unit.

"DRG is an excellent complement to other access technologies," says Per Bäckström, the system developer for DRG. "It can be used together with wireless systems, ADSL and cable TV, for example. This product can be an enabler for many applications, as well as many different Ericsson solutions."

Based on two patents

DRG is able to interoperate with and expand the capacity of the WebSwitch IP switch, the IP wireless access product Beewip and IPT, Ericsson's operator system for IP telephony.

There are three variants: DRG 22 for copper wire and DRG 23 and 24 for two types of multi-mode fiber. The first product generation will provide two Ethernet ports for connection to the network and the computer, respectively, and two conventional telephone jacks for IP telephony. Future product generations may offer other interfaces for TV and video and additional Ethernet ports.

The product is based on two Ericsson patents. The principle is that everything

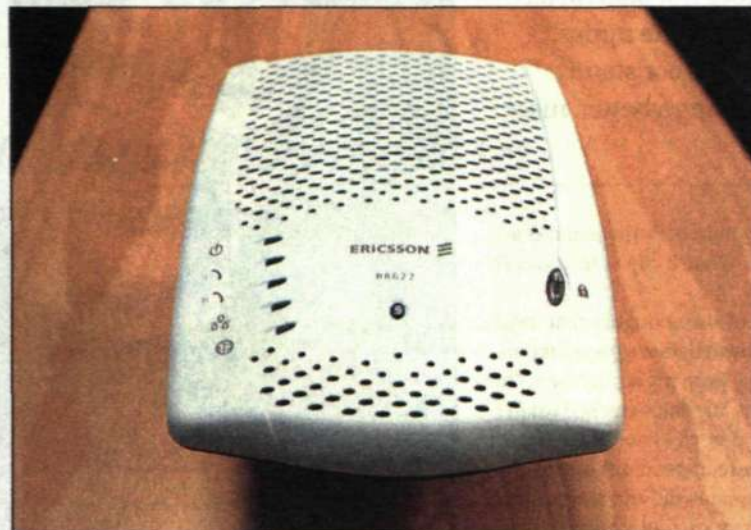
should be based on open standard, including the de facto standard for IP telephony clients, which is Microsoft NetMeeting 3.x. This means that DRG can be integrated with virtually all existing operator platforms for IP telephony based on the H.323 V2 standard. A telephone connected to a Residential Gateway acts as an IP telephone client that can be recognized and handled by all systems.

Unique combination

The Residential Gateway functions best with the control software DRG Manager, which is located on a server somewhere in the broadband operator's network. Using DRG Manager, the operator can easily register and configure new DRG users, allocate IP addresses for them, handle authentication, perform remote upgrades and handle other tasks.

There are already several products from different suppliers that can provide one or more of the Residential Gateway's functions. But the combination of a packet filter (firewall), Ethernet switch, IP telephony, fiber connection and control software undoubtedly make this a unique product.

"The goal was to develop an optimized product at a competitive price," says Olle Cederberg, who led the DRG development project. "We believe that we have been very successful. We were focused on combining high capacity with high quality IP telephony, but otherwise determined to limit the number of features in the product."



The DRG allows subscribers to connect the equipment that matches the services they select, such as a telephone for IP telephony.

The project began in late 1999 and has involved about 15 persons in Sundbyberg and Linköping. The first field test of DRG will begin shortly, while the product launch is scheduled to start in the spring of 2001 in Sweden, followed by the rest of Scandinavia.

Designed for home users

"Initially we focused on the residential market, meaning home users and the broadband operators providing services to them," says product manager Per Almstedt. "But the product is

also attractive in business solutions for small and medium-size companies."

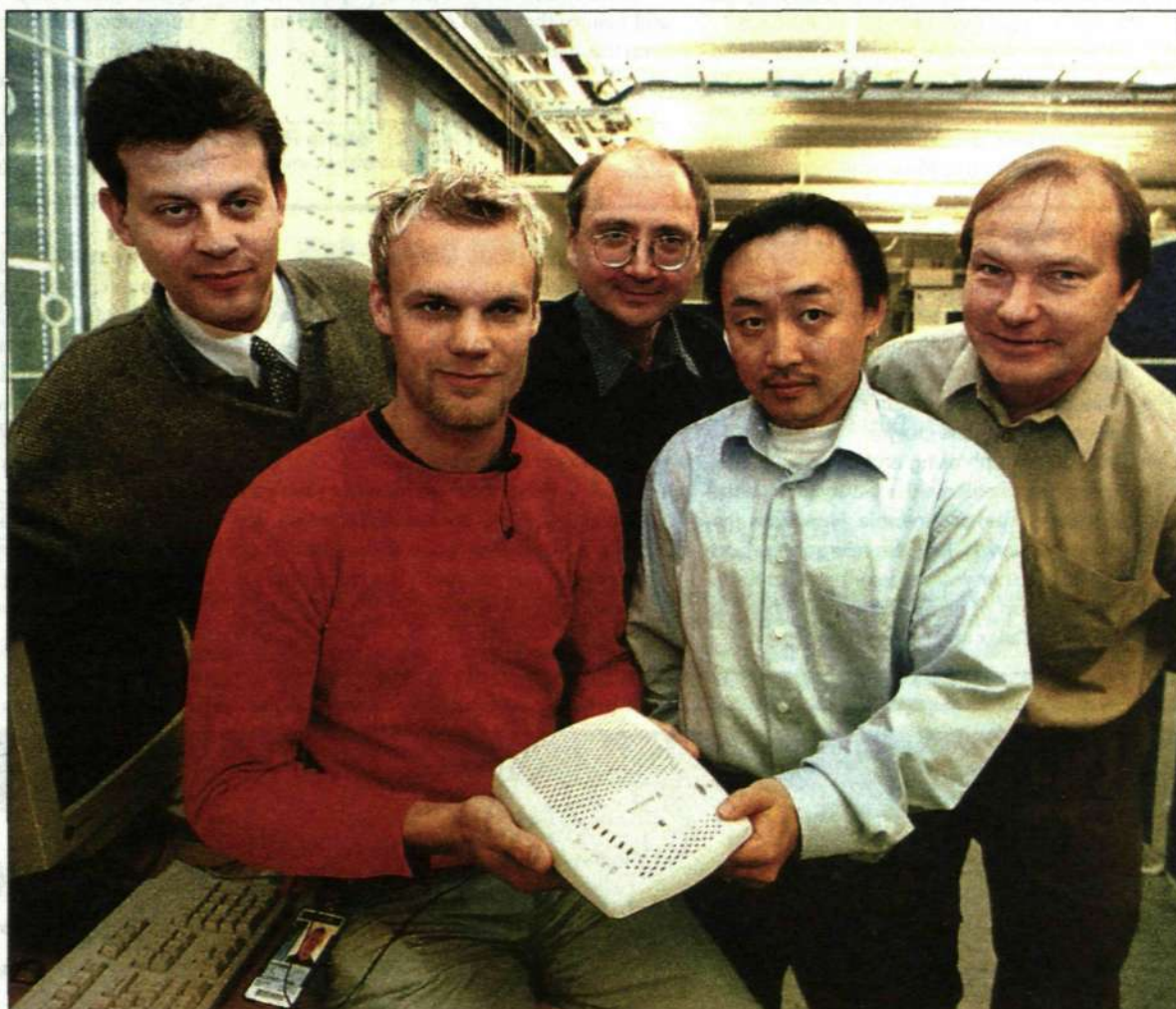
Operators and service providers are the most natural customer initially. Future product generations, however, will take the shape of consumer products. The goal is that DRG over time should be sold in retail outlets, just like telephones, modems and other computer accessories.

Kari Malmström
freelance journalist

FACTS/RESIDENTIAL GATEWAY

The Residential Gateway makes it possible to connect server types of user equipment to one point in the network where services converge and at that point separate services according to user preferences. One example of how this could work is as follows. Several different service providers deliver different services, such as IP telephony and Internet ac-

cess, via a router that is connected to the broadband network's central intelligence. All services are transported over the same infrastructure all the way to the subscriber. Using the Residential Gateway, individual subscribers can pick out the desired services and connect the equipment that best matches the selected services, such as a telephone for IP telephony.



The new DRG Residential Gateway product, which will be launched this spring, was demonstrated by Torbjörn Widh, Olle Cederberg, Per Almstedt, Per Bäckström and Kjell Lindén, who have all contributed to development of the product that will allow each subscriber to select the desired broadband services from the operator's service offering.

Photo: Lars Åström

Who does what in broadband?

► The emergence of broadband networks is changing the meaning of the word operator. This concept is now expanding to include several categories and levels.

A broadband operator owns and operates the network but also has a role as a broker for various services delivered by other operators or service providers.

As an example, an operator that operates an IP telephone network is a sub-supplier to a broadband operator that provides an IP telephony service.

In the same manner, ISPs (Internet Service Providers) can deliver Internet access as a specific service.

The broadband operator can contribute to the service content of the network but does not have to do so. It is up to the broadband operator, however, to enable the distribution of the various services to subscribers.

Ericsson's Residential Gateway, either on its own or in combination with the DRG Manager software, offers a solution that is efficient, scalable and flexible.

Kari Malmström

Public speaking is nerve-racking

In some ways, it's silly to be so nervous. When Siv Andersson speaks in front of a group, things always seem to go much better than she had anticipated. She does not plan on letting nervousness get the upper hand. Instead, she is constantly working to becoming a better, more relaxed speaker.

► What if I lose my train of thought and don't know what to say? What if my voice doesn't carry?

Those are some of the thoughts that swirl around inside Siv's head before a presentation.

"I think it's a legacy from my school days. On a couple of occasions, my voice cracked when I was reading out loud in class and it was terrible," she recalls. "The teachers didn't care at all."

Siv and her classmates did not have many opportunities to practice oral presentations, but once a year they had to stand up and tell about a book they had read. It was an assignment that Siv still shudders over.

"Things are different today," she says. "My children have been trained since daycare to sit in groups and talk about things. It is nothing remarkable for them."

Easier and easier

For a long time, Siv avoided situations where she would have to make group presentations.

But when she started working as the group manager and foreman at ERA in Nynäshamn, it was something she could no longer avoid. Part of the job involved holding weekly meetings.

"The first time was rather difficult. I was unsure about how to go about it," says Siv. "At the same time, it was easier than I thought. Everyone already knew who I was and I was focused on getting through it. I have to work on this if I am going to be able to take on those jobs that I want."

She's not sure what made her dare to speak publicly. She thinks it might have something to do with age.

"When you get a little older, the opinions of other people are no longer quite as important. You gain perspective on things and are perhaps a little bit more self-confident."

Siv has frequently observed other speakers and mulled over what makes a good speaker and what doesn't. The best speakers are those who appear calm and know what they are talking about. She thinks that her own presentations are rather stale.

"I'm not really myself. I stand there like a stick. I have a tendency to talk too fast and my voice becomes increasingly shrill," she says, demonstrating what it can sound like.

One method for generating a feeling of security is to prepare thoroughly, which Siv does. She plans out the order of what she is going to say so that there is a common element running through it.

Moreover, there should be a good mixture between dry facts and easy-to-digest information.

Siv writes down her ideas and then lets them sit for awhile before reviewing them with fresh



Ten years ago, nothing could have convinced Siv Andersson to stand up and talk in front of an audience. Since then, she has practiced and thought a lot about why she gets so nervous. Today she no longer hesitates before taking on a presentation, even though it is still nerve-racking.

Photo: Ann Ek

eyes. She also frequently practices to hear how it will sound.

Isn't it even worse to lose one's concentration while working off such a strict outline?

"No, I don't think so. You can also make use of small reminder notes. In the past, I used to think that there were people out there who were simply good speakers, that it was an in-born talent. But now I realize that most speakers train quite a bit prior to a presentation and that lots of us get butterflies in our stomach."

How nervous you get, once the moment is at hand, depends on several things. A friendly atmosphere makes things easier. If Siv notices that listeners are paying attention, then things also seem to go better. Most of all, however, it is

important that she understands the subject.

Over the past year, Siv has participated in LUP, a leadership training course for Ericsson production managers. Participants, who come from various plants around Sweden, are there to learn how to implement change. Part of the course involves presenting things within the group and to discuss each other's behavior in a constructive manner. This has meant a great deal to Siv.

"I think that I've come a long way, and I hope and believe that I will eventually come to like even this part of my job."

Maria Paues
maria@pauesmedia.se

TIPS/TEN SUGGESTIONS

- Understand your audience. Who will you be speaking to and what do they want to know?
- Plan in detail what information your presentation will include. Be selective.
- Work on your presentation so that there is a logical thread to the story.
- Practice both phrasing and body language.
- If possible, check out the facility in advance so that you feel comfortable. How does the overhead work? Test the microphone and decide whether you will use it and so forth.
- Do some sort of relaxation exercise prior to speaking. Relax and breathe deeply.
- It is preferable to start with something personal or funny that can help ease the tension. Dry facts can wait.
- Avoid looking at the ceiling. One trick is to maintain eye contact with someone who seems to be especially interested.
- Make use of talking points.
- Remember that listeners have not seen your manuscript. They do not realize when you make a mistake or when things did not go exactly the way you had intended, so there is no need to be embarrassed.

Siv is not alone

► Speech anxiety affects top executives, newly graduated engineers, young, old, men and women alike.

"For many people, it is an ordeal to stand up in front of others," says Torbjörn Althén, who teaches rhetoric and pedagogy.

Nervousness can manifest itself in many ways. Common symptoms include sweating, shakiness and dry mouth. Speaking rapidly or in a shrill voice, as Siv Andersson does, are also classic symptoms.

"Absolutely, yes," says Torbjörn Althén. "For people who are nervous, a short pause can seem like an eternity. The result is tendency to increase the tempo."

Torbjörn Althén believes that many people choose to avoid new challenges in their careers, simply because they know that it will involve standing up in front of other people.

"A few years ago, I read an American study about what people were afraid of," says Althén. "Speaking in front of a group took first place. It was higher than both a fear of death and a fear of spiders. That says quite a bit about how terribly difficult this issue can be."

Torbjörn Althén believes that it has to do with a fear of making a fool out of oneself or of having one's ignorance revealed, which is especially tough in a society that places such a high value on talent and performance.

Mikael Möller, who works on pedagogical and learning issues at the LME Learning Institute, oversees the LUP training program together with Torbjörn Althén, and in which Siv Andersson has participated. He recognizes lots of things from her story.

"Her account of how she did not receive any support in school is a good example," he says. "It is well known that the ability to speak in front of groups is established early."

Torbjörn Althén agrees that school plays an enormous role. A student who is forced to speak against their will and is then met with laughter or nasty comments can be broken for a long time to come.

Both are convinced, however, that anyone can learn to become a good speaker.

"Let me just say this. Nobody is born a good speaker. It is a difficult and challenging craft that requires substantial training," says Torbjörn Althén.

"You have to be willing to accept challenges. Of course, managers and foremen who can discuss what was good about a presentation and what could be improved are essential."

People who are sitting in the audience listening to someone who is clearly nervous can ease the tension by asking a friendly question that is easy to answer or by giving an encouraging remark.

Audiences are, for the most part, understanding. Since everyone gets somewhat nervous prior to giving a presentation, nervousness usually garners sympathy.

Maria Paues

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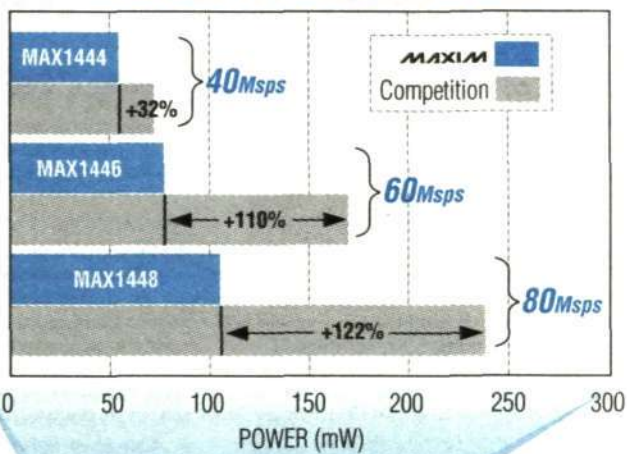
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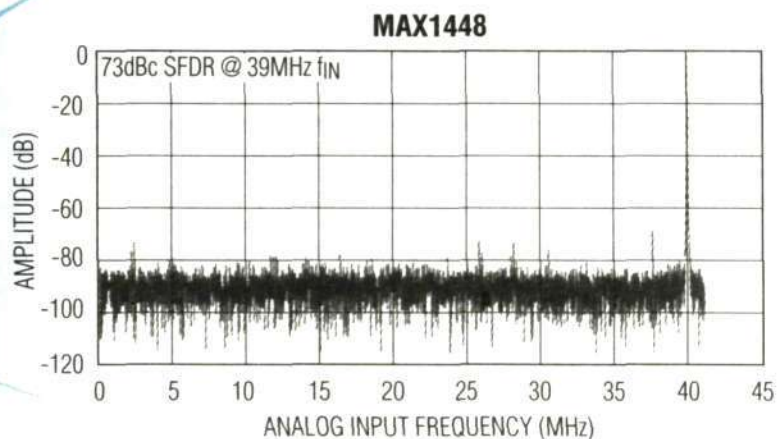


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For these opportunities, please contact: Patrick Orsini, +33-1-43-50-42-50, mobile +33-6-84-52-52-62, patrick.orsini@esf.ericsson.se

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For these opportunities please contact: Sébastien Barreau + 33-1-64-47-66-38, mobile 33-6-85-40-85-61 sebastien.barreau@esf.ericsson.se Or esf.drh@esf.ericsson.se

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Contact No. 15 2000

Updated September 24

ERICSSON LTD. GUILDFORD U.K. - NEW PUBLIC NETWORKS

To meet the growing demands of the Orange account the following opportunities have been identified within the Orange Operations team. All roles are based in Guildford with travel required to customer, based in Bristol and Ericsson organisation based in Sweden and Germany. All positions report to Mark Guilfoyle, Programme Manager.

Customer Product Assurance Manager

(Ref 369)

● As a member of the operations team within the Orange Customer Facing Unit(CFU) you will take responsibility for all issues relating to product assurance arising from design & development through to implementation and operational service.

Key responsibilities: This is a high profile customer facing role with the opportunity for the individual to establish themselves as an authority within UMTS technology introduction.

The role of the Product Assurance Manager will be to work within the team supporting the following: Establish Customer relationship and handle queries relating to Ericsson processes and practices. Work closely with the technology introduction activities liaising with Orange to establish a clear understanding of both customer requirements and product characteristics. Establish links with internal Ericsson organisations responsible for the development, verification, manufacture and supply of '3G' products specifically UTRAN (RNC, NodeB) and Support systems. Undertake assessment of third party suppliers in relation to contractual obligations. Initiate improvements within Ericsson based on customer needs and internal findings relating to the product, it's introduction and operation. Actively participate in technical review and project meetings with Orange. This is a senior role within the team and it is unlikely that someone with less than 10 years industry experience, 3 years quality management, would have the necessary experience to execute the role.

Key requirements: Good inter personal skills and extensive capabilities in the area of relationship management: Experience in the field of mobile radio telecommunications of at least two years: Experience of 'quality' management. Ideally you will have a detailed knowledge of recognised approaches to Quality; practical experience of associated tools and techniques (e.g QFD, FMEA.) and how these are applied during the product development process: Ericsson GSM BSS product knowledge.

Customer Solutions/Product Manager -UTRAN

(Ref: 375)

● As a member of the customer solutions team, you will be focusing specifically on Radio Access, UMTS (RNC and NodeB.) The role of the Customer Solutions / Product manager would be to work within the team supporting the following: Feature and functional specifications. Work closely with the technology introduction activities liaising with Orange to establish a clear understanding of both customer requirements and product capabilities. Deal With Technical queries with existing and future product issues. Actively participate in technical review and project meetings Orange. Support Orange in their migration from a 2G to a 3G network. Establish and manage a customer 'roadmap' liaising with Ericsson Strategic Product Management and other France Telecom accounts. Remain up to date on regulatory issues and competitor developments

Key requirements: Good inter personal skills and extensive capabilities in the area of relationship management. Experience in the field of mobile radio telecommunications of at least two years. Experience of product management. Ideal Requirements: Detailed knowledge of GSM BSS hardware and software: Ericsson GSM BSS prod-

uct knowledge. An understanding of GSM, GPRS, EDGE and UMTS requirements. IP Technology (including Mobile IP) IP/ATM Transport Technology

Contact: Helena Leach HR Advisor: helena.leach@etl.ericsson.se, CV to myfuture@etl.ericsson.se quoting appropriate reference no.

ERICSSON LTD, GUILDFORD, UK

Snr & Data Transcript Engineers

(ref: 325)

The data transcript section forms part of the Operations Services department. The section is responsible for providing all data required for commissioning, integration verification & acceptance (IVA) of new switches, extensions, cellular parameter data for integrating and commission (I&C) of new cell sites, cellular parameter data for optimisation of cellular networks, and implementation of new software / hardware functionality. The data transcript section are responsible for 3 major customers: One2One, Cellnet and ICO.

● The data transcript engineers are responsible for the creation and adaptation of the exchange dependent data (MML) files for AXE systems in all previously mentioned areas. They will be responsible for creating procedural documentation and service level agreements where required and ensuring they are adhered to. They will continuously strive to improve and develop new and existing process. They will actively seek to highlight and develop improvements in data transcript tools. The engineers will be responsible for working as part of a team and maintaining good working relationships within the team and with it's key customers.

Qualifications and experience: Essential; At least 2 years experience of Data Transcript in AXE 10 environment preferably CME20, or other proven testing/switching/support experience. Computer literate. Able to travel within the UK and overseas on occasion. Desirable; Higher technical qualification in telecom, radio or software related subject. Working knowledge of Ericsson procedures and experience in Data Transcript tools development.

Contact: Mark Phillips, Data Transcript Group Supervisor, Principal Data Transcript Engineer, +44 1483 407375, mark.phillips@etl.ericsson.se. Application: myfuture@etl.ericsson.se.

ERICSSON CANADA, MISSISSAUGA, ONTARIO, CANADA

Business Manager, TDMA Business

● Department: BST-Mobile Systems. Location: EMC Salary Band: Six (6). Job Requirement: Five-Six years experience developing marketing strategies and plans. 2-3 years experience completing business analysis and developing business plans. An MBA or other business degree, or equivalent experience. Some technical background an asset. Job Description: Takes profit and loss responsibility for product portfolio. Works with business strategy group to assess market segments for their potential with product portfolio. Assesses market fit of new products and defines marketing strategies for new product introductions as well as products to discontinue. Develop marketing plans for existing and new products. Secures information on product pricing and creates a pricing strategy. Provides product business cases. Actively works with customers to identify most cost effective solution to suit their business needs, lead and co-ordinate business presentations, participate and support contract negotiations, identify/clarify customer requirements. Manages the marketing aspects of new product introductions and product revisions. Provide business case presentations on

products to demonstrate potential applications and solutions to customers. Support EMC sales teams in developing customized business solutions/responses to customer requirements. Ensures product training is available.

Product/Business Manager, CDMA Business

● Department: BST-Mobile Systems. Job Requirement: Degree in Engineering or related discipline, or equivalent work experience. Five years in a telecommunications environment, ideally in a Product Management role. Five-Six years experience developing marketing strategies and plans. 2-3 years experience completing business analysis and developing business plans. An MBA or other business degree, or equivalent experience. Some technical background an asset.

Job Description: Translates customer needs and wants into technical specifications. Interfaces with the customer on all technical issues related to new products/features introductions.

Understands customer's current network and evolutionary requirements. Makes customer presentations on technical aspects and features of products. Follows and understands Canadian market trends, opportunities, market developments, regulatory and standardization activities. Provides technical expertise on products from Global Ericsson portfolio; assists the business manager to assess market fit of new products coming from product units and provides technical feedback to product units. Identifies new and unassigned products requiring analysis through BS group. Actively influences technical development of at the Ericsson product units; secures updated information on product releases, product availability, product features and rollout. Analyzes technical strengths and weaknesses of competitive products. Owns the quality and performance of the product. Manages the technical aspects of new product launches or additions of features to ensure their effectiveness. Gathers information and/or conducts technical studies in order to facilitate the introduction of new products with minimal impacts to existing systems. Keeps contact with the market by participating or attending technical presentations, discussions, tradeshow, seminars, etc. Define technical requirements for demos and trials for customers, trade shows and Ericsson Lab. Present technical product overviews to initial sales teams and other key stakeholders. Assists EMC sales teams to develop technical solutions and responses to customer requirements. Participates actively in RFI/RFP work. Manage technical solutions within Core 3. Takes profit and loss responsibility for product portfolio. Works with business strategy group to assess market segments for their potential with product portfolio. Assesses market fit of new products and defines marketing strategies for new product introductions as well as products to discontinue. Develop marketing plans for existing and new products. Secures information on product pricing and creates a pricing strategy. Provides product business cases. Actively works with customers to identify most cost effective solution to suit their business needs, lead and co-ordinate business presentations, participate and support contract negotiations, identify/clarify customer requirements. Manages the marketing aspects of new product introductions and product revisions. Provide business case presentations on products to demonstrate potential applications and solutions to customers. Support EMC sales teams in developing customized business solutions/responses to customer requirements. Ensures product training is available.

Contact: James Israel, Director, Mobile Systems, james.israel@emc.ericsson.ca

ERICSSON (CHINA) COMPANY LTD., BEIJING, P.R.CHINA

Ericsson has together with China Academy of Telecommunications Technology started a joint

Research and Development Center in Beijing. With this we've established local R&D in China within the 3G standard of wireless communication.

Senior I&V engineer

● We look for an experienced integration and verification engineer with excellent technical skills within the RBS area. Focus of the job will be on base band signal processing. You will be the expert on I&V within a brand new R&D organization. The job will also require a lot of coordination with other Ericsson R&D Centers around the globe. You probably have a master degree in engineering and you have to be fluent in spoken and written English. Earlier experience in work within WCDMA RBS development is a plus and earlier experience within the Ericsson organization is a requirement.

Contact: Hans Mähler +86 10 6230 3491 or +86 137 0121 6982, hans.mahler@etl.ericsson.se or Sunny Li Xiaolei +86 10 6561 5566, xiaolei.li@etl.ericsson.se. Application: Human Resources, Sunny Li Xiaolei, Ericsson (China) Ltd, 9/F, Hanwei Plaza, No. 7 Guanghua Lu, China.

ERICSSON LTD, PRODUCT UNIT OPTICAL NETWORKS, HORSHAM, UK

8 Support Engineers

● KEY RESPONSIBILITIES: Within the Customer Support Services team you will be providing a first class support service to our customers based around the world. This service includes providing emergency and day to day support to Optical Networks customers.

Technically knowledgeable you will be required to support networks/products, diagnose problems, communicate and investigate solutions with customers. The role interfaces with internal and external customers and knowledge of third party supplier products is required.

The role requires travelling both in the UK and overseas and sometimes working outside normal office hours. The role will require a pro-active approach to ensure that specifications, time, quality and cost objectives are met. The same approach is required to provide support to other members of the team in cascading expertise and also to seek advice from other specialists in order to resolve technical issues.

You will also attend customer meetings, produce progress reports, maintain records, implement corrective actions, upgrades and carry out product maintenance tasks.

COMPETENCIES, QUALIFICATIONS AND EXPERIENCE: Ideally you will have highly developed skills in Unix & PC. Administration and good technical knowledge of telecommunications and SDH.

The role also requires: A degree or equivalent qualification in telecommunications, electronics or computer sciences. Previous experience in the management/maintenance of transmission systems. Customer service skills and knowledge. Clear and concise communication style- both written and oral. A continuous learning style, learning from experience and taking responsibility for identifying and addressing personal development needs.

Contact: Shavak Madon +44 1403 277290. shavak.madon@etl.ericsson.se or HR: Llynor Rathbone, +44 1403 277557. llynor.rathbone@etl.ericsson.se

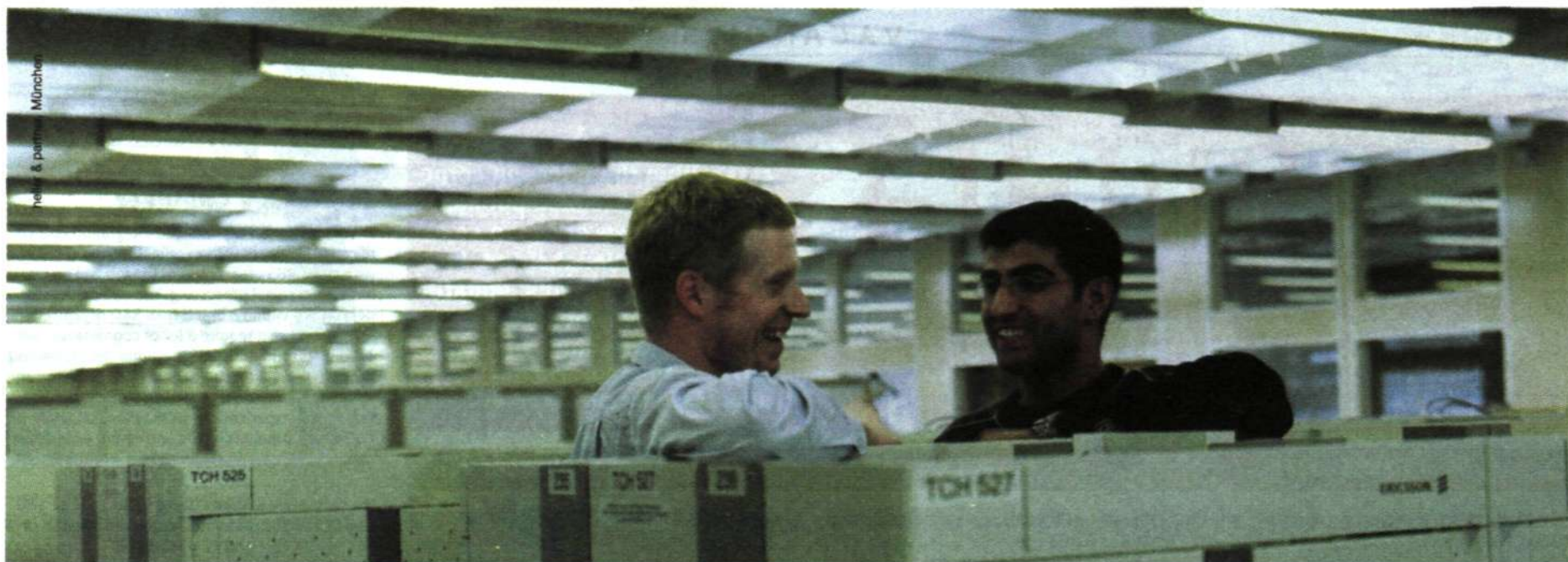
2 Verification Engineers

● KEY RESPONSIBILITIES: Within the Verification team your main responsibility would be conducting validation and verification activities on Optical Networks products. You will be liaising with customers and internal colleagues to ensure that each piece of work is completed to the customers' specification. Travel to customer sites (UK & overseas) is required for meetings, testing, customer demonstrations and acceptance tests etc.

The role will require a pro-active approach to ensure that specifications, time, quality and cost objectives are met. The same approach is required to provide support to other members of the team in cascading expertise and also to seek advice from other specialists in order to resolve technical issues. The responsibilities will also include the production of trouble reports, test documentation and internal testing processes.

COMPETENCIES, QUALIFICATIONS AND EXPERIENCE: Ideally you will have a background in the installation, testing or commissioning of transmission products. Familiarity with the Product Unit Optical Networks' product portfolio (eg SMA, MSH, Marconi SDH, datacomms, DWDM etc) would be an advantage - see web page: <http://on.ericsson.se/>.

The role also requires: Higher technical qualification in telecommunications or telecommunication related subject and/or at least 2 years experience of testing or commissioning in a relevant



Guido, Project Manager and Taner, GPRS Tester, having a chat in the mobile internet.

Ericsson Eurolab in Herzogenrath/Aachen, Germany, is a dynamic international Research & Development center, located in the heart of Western Europe. We are responsible for development and integration of 3G core network, including the management of international operations of Node Product Unit MSC and Core Product Unit Application Core (CAPC). This includes Product Management, Systems Management, Project Management and Performance Management (Processes, Methods, Tools and Quality). Close to 900 employees from more than 40 nations are working on all phases of the product life cycle, from Research and Systems Design to Supply and Third Level Support. And we are facing some further growth.

Senior System Designers, GSM and UMTS/3G

Your main tasks will be to carry out and coordinate system studies and other activities in the wide field of system management for GSM and UMTS projects. This will be in one or several of the following activity areas: Technical Studies for the Core Network & MSC; Characteristics & Dimensioning for Core Network & MSC; System Management Interface for Market activities; Core Network related Standardization; Operation & Maintenance.

As we are looking forward to strengthen our system management organization significantly we offer challenging positions for very experienced designers with the ability to motivate others, take decisions and convince with a strong and balanced personality. Suitable candidates possess an engineering degree (e.g. telecommunications, electrical engineering or software engineering) with a minimum of 5 years experience in design, system level development or research. Good verbal and written communication skills, a high level of personal initiative and the ability to work autonomously are essential for this position. Knowledge of mobile Telecommunications or IP & datacom networks is an advantage.

Software Design Engineers

We would like to strengthen our core competence in traffic handling and network architecture with external expertise. We are offering plenty of opportunities to learn and progress in a challenging and changing design development environment. You would be part of a fast moving team developing a new system, which migrates towards a successful future proof development product. A key product for Ericsson for its market positioning.

For this reason we are looking for a number of experienced software design engineers who want to play a leading role in the evolution of Ericsson's AXE systems. You should have a minimum of 2 years experience in a design development area be familiar with complete telecom systems, have programming experience in a number of different languages, SDL knowledge. A working knowledge of structural design methods is required for these positions. To be successful you need to have very good communication skills, quality orientated, innovative and a strong team player.

GSM SS/UMTS System and Network Testers

Testers are mainly responsible for test design and test execution needed to integrate and industrialize mobile telecom/datacom networks of the third generation. This involves node testing on AXE10, CELLO or JAMBALA platforms and GPRS nodes; network testing in a network containing C7, ATM and IP interfaces; trouble shooting, configuring and tuning the whole UMTS network. The test execution is mainly performed in target environment.

As a suitable candidate you have experience in software testing or design, preferably in the area of AXE10 based GSM systems; knowledge of Intelligent Network (platform, services or CAMEL), charging or #7 Signalling is a significant plus. In the UMTS world testers will need more and more datacom knowledge. So people with experience in TCP/IP or ATM networks, UNIX, Windows NT or other platforms; C/C++, Java or other higher programming languages are most welcome. In addition we expect good communication skills, openness, respect, initiative and reliability to work as an effective member in our project teams.

Product Managers/Program Manager for GSM, UMTS and 3G IP Evolution

Strategic product management for GSM, UMTS, Application Core and 3G IP Evolution is done in co-operation with local product managers, core network product managers and system experts. The focus is on the business and product aspects and our tasks include business planning, business cases, pricing, standardization strategies, product roadmap & plans, release responsibilities, product packaging, requirement coordination between different applications, statements of direction, meganetwork program, contract and tender support, and product presentations. We participate actively in formulation of the 3G and all IP Architecture core network contents with our key customers and partners in Ericsson.

The program manager has an overall responsibility for the planning of product, taking into account market requirements, business

aspects, technical trends and standardization strategies. The program manager also inter-works with the development projects in order to get the created plans implemented in consecutive releases. The strategic product managers are responsible for defining product solutions with the close co-operation to market. They also responsible for the planning the development of product management areas related to the product considering the profitability over the product life cycle. The tasks include defining product strategies, development of product information, customer presentations and tender and contract support. We look primarily for experienced product or system managers who have a solid technical and business understanding of mobile solutions offered by Ericsson.

Process, Methods, Tools and Quality Management

The general focus in these positions is to take the responsibility for processes, methods, tools and quality in the the projects. The main authorities and tasks are: supply the projects with suitable methods and processes to enhance the system and software design process, initiate the use of improved and/or new methods and processes, take process and quality measurements, plan and perform project/process audits, monitor and evaluate methods and processes used in other organizations in order to identify potential process improvements, support the project office in all methods, process and quality related activities. Evaluation of new processes, methods and tools and initiating pilots are part of the role. You will coordinate the network with your counterparts in the various subprojects.

You have a background in management and/or project management in Ericsson operations and/or a strong background in software engineering. Also flexibility and willingness to change is a must. Background in managing improvement programs in development environments would be advantageous. Any previous experiences with methods, tools, processes, audits and project work is appreciated. Last but not least you should have a high interest in methods work and see this job as a challenge for you and the company. You will be able to set clear goals, define messages and strategies and see through the implementation of the strategic improvements.

Line Manager / Competence Manager

We are looking for enthusiastic and people oriented managers and colleagues, who will be responsible for 10 to 30 people. You must have excellent leadership, communication and (self-) management skills. You will take care of finding the optimal match between operations and business needs versus our people's competencies, wishes, ambitions and capabilities on the other side.

The main tasks and activities are: Resource planning, project resource contracts, participation in assignment board and management team, performance management and development talks, recruitment, salary review & setting, team coaching, career development and planning, keep a thorough overview and understanding of all operations. You need to have an understanding of the impacts of future technologies for strategic competence planning etc. You should have the combination of strong operational orientation and a interest in human beings.

Project Manager

In this positions you manage key projects for 2G and 3G wireless systems and partly also for wireline systems. The projects we run are in pre- and feasibility-study, implementation, verification, global supply&support and total projects. They encompass subprojects in different continents. We require specialization in telecommunications or datacom technology. Some years work experience in technical aspects of telecommunication and proven experience in project management are required. Good knowledge of PROPS, project planning, budgeting and management methods are a necessary base. Good knowledge of mobile telephone systems and Ericsson business practices would be an advantage. Resourceful, flexible, initiative, good communication, cooperation skills and a good ability to work under pressure are important personal qualities. Traveling is a natural part of the job. Fluency in written and spoken English is required. Furthermore you should have strong interest in people and be willing to develop as a leader. The main tasks are to lead a large telephone system project with full responsibility for fulfillment of Ericsson's commitments to our customer.

For further information about our open positions please visit our homepage:
<http://www.eed.ericsson.se>

Please contact

Ericsson Eurolab
Deutschland GmbH
Herzogenrath/Aachen,
Germany
Human Resources
Simon Seebass
Dial +49 2407 575 163
eMail:
Simon.Seebass@eed.ericsson.se

ERICSSON 

product area. familiarity with UNIX/Windows NT. Strong analytical skills with a proactive approach for problem solving. Clear and concise communication style- both written and oral. Continual learning style, learning from experience and taking responsibility for identifying and addressing personal development needs.

Contact: Simon Cooper +44 1403 277460, simon.j.cooper@etl.ericsson.se or HR: Lynor Rathbone +44 01403 277557, lynor.rathbone@etl.ericsson.se

ERICSSON AUSTRIA AG, AUSTRIA

Regional ASP Program Manager

The Regional Office CEMEA (Central and East Europe, Middle East and Africa) has been operational here in Vienna, Austria since 1st of april and is as of 1st september fully responsible for the operation of the new Multi-Channel Strategy in 36 countries.

● We are looking for a person as Regional ASP Program Manager who will lead the certifications and audits in the region, have regular contact with the ASPs (Authorised Service Provider). He/she will also be responsible for including new products and new service providers in the program. The task will also be to be coordinator for regional ASP's, verify service readiness plans and introduce and run the global certification program in our region.

As the ideal candidate you should have good knowledge and experience from service, negotiation skills, good communication skills in English (other languages such as German, Italian are a plus), financial understanding, readiness to travel and flexibility and customer oriented thinking.

Contact: Ericsson Austria AG, Pottendorfer Straße 25-27, A-1121 Vienna, Austria, Rickard Lundmark, +43 1 811 00 - 5915, rickard.lundmark@sea.ericsson.se.

ERICSSON TELECOMMUNICATIE B.V., RIJEN, THE NETHERLANDS

Within the Business Line Customer Services, department Network Management we have a vacancy for:

UMTS Radio Planner

● Goal / challenge / tasks: As a UMTS Radio Planner you are responsible to support our customer in the Operation & Maintenance activities for the UMTS service. In this role you must be approachable for the customer and be able to translate problems of the customer into technological solutions.

Required competences: Experience in Mobile Networks (GSM / WCDMA/ TDMA) Experience in Mobile products (RBS / RNC / BSC / Mini-link). Experience with Radio or Cell Planning is an advantage. Helicopterviewing in locating problems. Good communication skills in English (Dutch is a plus).

Application: Loet Pessers, Manager Operations within the BL Customer Services, +31 161 249200.

Customer Service Manager

● 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 (Holland, United States and Australia) which enables continuous 24hr support to Global Operators.

All activities are being executed in an international environment. Our organization is characterized as challenging, dynamic, progressing and provides excellent opportunities for personal development. The Customer Service Manager provides the GCSO services to one or more customers and is responsible for a group of resources that help him/her accomplish these services.

Tasks: Customer Service Manager I and II. We are looking for two Customer Services Managers who will be responsible for: All support activities needed for Global Customers. Initiating and maintaining Service Level Agreements and Working Level Agreements towards all involved support providers and the Customer Network Management Centre or equivalent. Customer CSR list and candidate lists per customer. Ensuring that GCSO and GRC Engineers are updated with all current support information. Defining Key Performance Indicators together with the customer(s). The Support Management Reports to customer and/of Network Management Centre including statistics,

problem list, etc. Additional task Customer Service Manager II: Stand-in for Resource & Duty manager at his absence; operational management of engineers teams

Required competence: Customer Service Manager I and II. Education minimum technical HBO/University level. Knowledge of AXE. 5 years experience within Ericsson service area. 2 years relevant management experience. Able to work under pressure. Team player. Good communication skills in English. Additional requirement Customer Service Manager II: People Management skills; Ability to develop and succeed Resource&Duty Manager in 12-18 months time.

Contact: Andrew Massie, Resource & Duty Manager, ext. 7216 or Agnes Brier, HR Officer, ext. 7516.

ERICSSON RESEARCH, MONTREAL, CANADA TSS/MGTS Traffic Design and Support Engineers The Montreal based PU-MSC is looking for:

TSS/MGTS Traffic Design and Support Engineers

● Our trade mark : drive the next generation of the mobile Internet, be bold, thrive on innovation, learn, celebrate your successes. Working in Montreal is where the American culture meets with the European one, where you can enjoy the beauty of four seasons, live near downtown but close to the country side. You can enjoy this life style while sharing and growing your competencies as a TSS2000/MGTS Traffic Engineer.

In this role you will have to analyse, design and implement TSS2000/MGTS protocol simulation scripts for function test as well as product line test of our TDMA and CDMA MSCs products. You will constantly strive to improve the existing tools by issuing improvement proposals where such might increase the usability in terms of simplicity or scope of usage. You will be regularly involved in on-call, emergency and helpdesk support tasks.

You must be fluent in English, speaking and writing, have an University degree in either Engineering or Computer Science, have at least 3 years of experience with MGTS and/or TSS2000 and in either of the two standards (preferably both) TDMA or CDMA. Additional background of programming in C++ and Java would be a strong advantage. Team spirit, the ability to deal with the unplannable and the joy of work in a multi cultural environment shall complement your technical skills to perfectly fit a team of young, enthusiastic and driven engineers.

Contact: karl-heinz.welter@lmc.ericsson.se. Application: maryse.durand@lmc.ericsson.se

GSM system support expert

● We have an interesting challenge for you within our new GSM Contract in Sri Lanka which includes new MSC, BSC, SCP, CGSN, WAP with PPL, SMAS, VPN, I&B and BGW.

The main responsibilities for this position will be to provide technical competence for resolving complex problems at highest technical level and provide technical advice and assistance to Support Engineers. Also transfer trouble shooting skills and competence to Support Engineers. The responsibility will also include TR/CSR handling and being on emergency service.

The competence requirements are: Minimum of 6 years working experience on AXE (mainly MSC), RBS 2000 in verification and/or Support environment. The experience in IN, WAP and GPRS is would be added advantages. Candidate should also have good English Communication skills. Qualification: Degree in Computer Science, Electronics or Telecommunication Engineering. The initial contract will be for 6 months.

Contact: saman.gunasekara@esl.ericsson.se

LM ERICSSON LTD, BEECH HILL, DUBLIN IRELAND

Product Manager for ASP

Opportunity

● Ericsson is aggressively targeting the Application Service Provider (ASP) market segment with a unique offering called Unified Private Networks (UPN). The business concept for an ASP is to offer a one-stop Hosting Center to businesses for voice and data business applications. Business Communications Solution Centre (BCSC) is responsible for defining and managing the Ericsson UPN solution offering.

Typical component products include Unified Message, Interactive Voice Recognition, Enterprise Communication Portal, Call Centre application, Directory and Private Numbering Plan combined with Managed Services and the blue-print

to run a Hosting Centre. We will partner with, sell to and aggressively compete with some of the biggest players in communications technology.

BCSC is establishing an innovation cell to rapidly develop and run this UPN business opportunity. The unit is expected to cover every aspect of the business from sales, system and product management, partnering, supply and support. We are currently advertising for the following key role:

Strategic Product Manager

● The Strategic Product Manager will define the contents in the forth-coming versions of UPN. He/she is responsible for: Defining the components for inclusion in upcoming releases of UPN. Translating market needs to timely solutions. Identifying suitable partner products and placing requirements on these partners. Promoting the sale of UPN to initial key customers. Working closely with players in ASP market to understand business comm. Opportunities. Acting as Product Champion.

Key skills required for the position include: Industry knowledge (telecom and datacom). Proven communication and organisation skills. Ability to interpret customer requirements and market trends.

Good team working. Attention to detail. Ability to influence others.

Systems Architect

● The Systems Architect will have ultimate responsibility to ensure that the overall UPN offering is coherent and is technically viable in terms of QOS, openness and market adaptation.

He/she is responsible for: Defining the technical direction for upcoming releases of UPN. Designing and maintaining the overall system architecture of the UPN solution. Identifying the key interfaces and standards within the offering. Evaluating potential products for suitability within the offering.

Key skills required for the position include: Industry knowledge (telecom and datacom). Proven communication and organisation skills. Ability to interpret customer requirements and market trends. Good team working. Attention to detail. Ability to influence others.

Contact: Bridget.Doyle@eei.ericsson.se, +353-87-6837203, +353-1-2077016.

NIPPON ERICSSON K.K. - JAPAN

The IMT-2000 Research and Development department located in Yokosuka Research Park, south of Tokyo, has the following opening.

Senior system designer/ System designer

● In Yokosuka Research Park (YRP) we are a growing unit working with software development for the Wideband Base Transceiver Station (WBTS) with NTT DoCoMo as the customer.

The software project for this product is distributed between several design centres in Sweden and YRP in Japan. Our tasks concern system design and software development for operation & maintenance and traffic control.

The software is run in an embedded system and we are currently using C and VxWorks real time operating system.

We are now looking for a senior system designer or system designer with at least 3 years experience in mobile communication.

As we are still a small unit, work tasks will vary and can include such as; customer requirement analyses, system design, coaching of junior staff, participate in design and code reviews and team leading.

Knowledge in the following areas is regarded as a merit, C, VxWorks, UMTS, WCDMA, WBTS and Wictoria. As the WBTS project is distributed on many design centres a good contact network in PU-WRN would also be an advantage.

Contact: Jan-Olov Eriksson, +81 468 47 5212, jan-olov.eriksson@nrj.ericsson.se or Erik Svedmark, +81 468 47 5215, erik.svedmark@nrj.ericsson.se

3rd Generation WCDMA/IMT-2000 OPPORTUNITIES IN JAPAN

The deployment of the IMT-2000/WCDMA Network is about to begin in Japan and within Nippon Ericsson we are looking for talented technical managers, engineers and project managers to help undertake in this major challenge; then to support the customer when this network is in service.

All positions require a strong customer focus and the successful candidate should be able to

work well within a team environment and be able to work with people from a large range of cultural backgrounds. English fluency is essential with proficiency in the Japanese language being highly desirable. The positions currently available are within the IMT-2000 Network Support Department (a part of the Customer Support Division) which is located in Shin Yokohama. However there are also some opportunities in other regions in Japan. For more information please see: <http://inside.jp.ao.ericsson.se/sw/>

Support/Integration Engineers (Core Network/Radio Network and Applications)

● The successful candidates will be responsible for providing system support during the implementation of the IMT-2000/WCDMA network and then provide technical support for the network once it is in service. The applicant is required to have at least 3-4 years experience in a system support, verification or design role in the mobile telecommunications field although applicants with a background in fixed networks are also encouraged to apply. These positions offer an excellent opportunity for engineers wishing to move into the IMT-2000/WCDMA field and a number of vacant positions are now open.

Contact: Ralph.Ward@nrj.ericsson.se, Support Manager, IMT-2000 Network Support Department, Kasem.Mohamed@nrj.ericsson.se, Integration Manager, IMT-2000 Network Support Department.

O&M Engineers

● In order to provide the highest level of support to our customer in Japan a Customer Operations Centre is being established to provide 1st line support 24 hours/365 days a year. Therefore a number of positions exist for engineers with system/O&M support experience who are able to deal with support problems/questions from the customer across a wide range of system platforms. These positions offer the opportunity for engineers to gain competence across a number of IMT-2000 related disciplines and system platforms (e.g. Datacoms, ATM, TCP/IP, Cello etc.).

We are looking for engineers who have 3-4 years O&M or support experience in mobile systems particularly with GSM switching and/or radio competence. There may be a requirement for these engineers to work after hours and on weekends as a shift leaders as part of the 8 hour shift roster for the operations centre.

Contact: Ralph.Ward@nrj.ericsson.se, Support Manager, IMT-2000 Network Support Department.

Technical Manager (IMT-2000/WCDMA Competence Development)

● Due to rapidly changing telecommunications world and with the introduction of new platforms/technology there is a need to focus on the competence development of all personnel working in the technical area of the WCDMA/IMT-2000 in Japan. This manager would need to have background in support and be able to grasp new technology quickly so that competence plans and training could be arranged for personnel as required.

The successful applicant would also need to work as part of a team of engineers and managers in developing new support strategies/work processes etc. Part of this person's duties would also be to provide advice to other units on WCDMA competence planning and towards the customer as required.

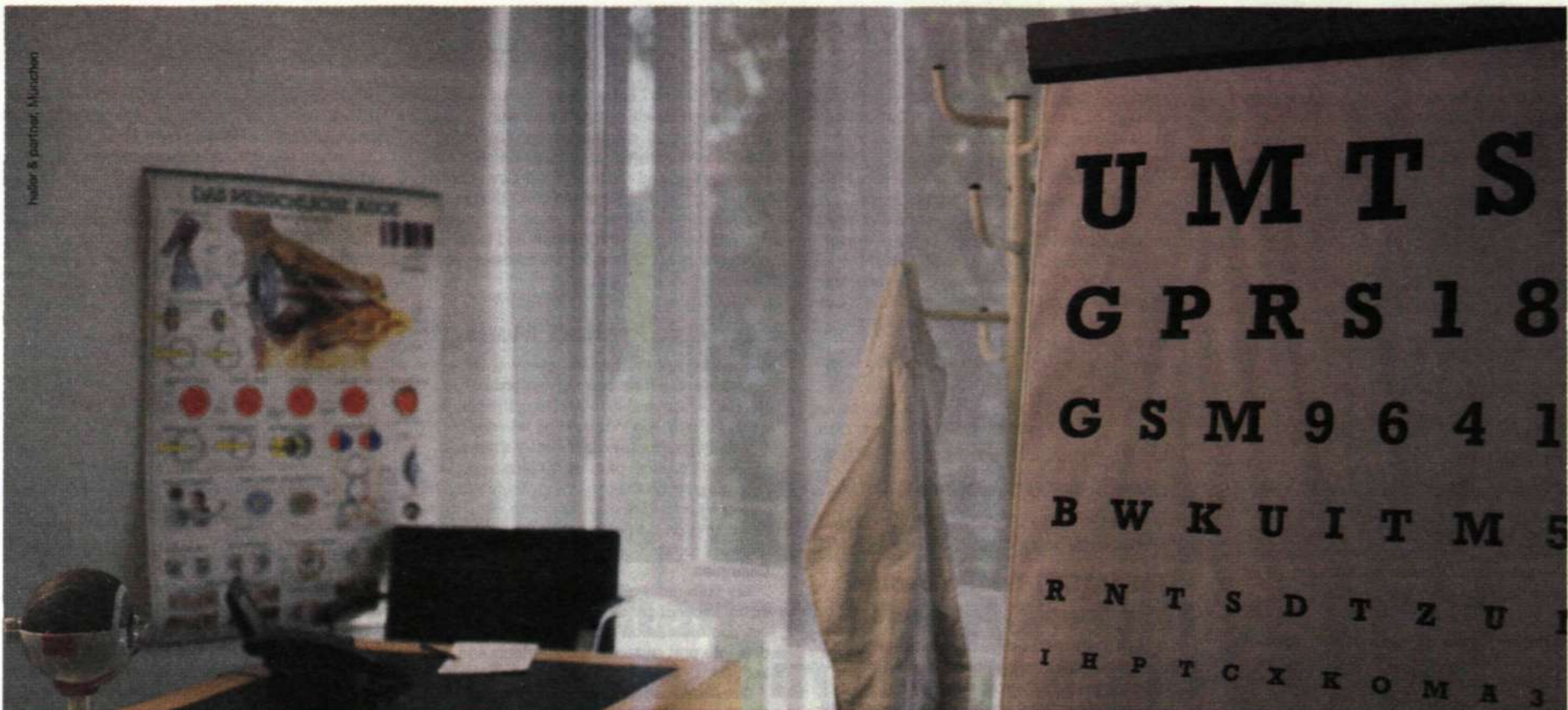
Project Managers

● We are looking for a number of Project Managers to work within the IMT-2000 FOA Project in the Core Network area with a focus on packet data and also in other areas of the project.

The applicant should have 2-4 years experience in a similar role or as a technical/support manager and be able to lead a small project team if required. Previous experience in dealing directly with external customers is also highly desirable. The successful candidates need not only sound project planning skills, but also need the ability to grasp quickly new concepts and technology.

Contact: Greg.Atkinson@nrj.ericsson.se, Senior Manager, IMT-2000 Network Support Department.

Training as required will be provided and some overseas/domestic travel may be necessary. There may also be a requirement for some engineers to available at times on an emergency support/on call roster. After hours work (i.e. nights



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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 the engineers vacancies you will be introduced by a training on the job, which will be intensified by courses. You match well with our young international team, if you have a technical degree or appropriate professional experience. You feel at home in the UNIX world as user or administrator. Experience with relational databases, TCP/IP networks, Java or shell script programming would be an advantage.

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

Customer Solutions Manager Mobile Internet

One of the most dynamic markets in Europe is moving rapidly towards realising 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 Mannesmann - 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 have a good mixture of Technical and Business competence through education and practical experience.

Solution Marketing Manager Network Management Solutions

Your main responsibilities are in the area of both technical product management and product marketing for Network Management Solutions. You translate customer needs and wants into NMS through competent solution know-how and interaction with the relevant product units.

As a suitable candidate you should have a university degree in engineering or related discipline and experience in network management technologies, systems and applications. Fluency in English is a requirement and because of working with tenders and making presenting of our solutions a command of German is desirable.

Customer Solution Manager - Applications, Mannesmann Group

You will be part of our focused efforts to create image, presence and a major market share in the area of applications for the Mannesmann group. Our customers, being ISPs as well as Mobile operators, are moving fast into new opportunities, bringing their position forward in the area of content alliances, e-commerce and mobile internet. We have a very strong and successful business relation, being the main supplier which we now need to further expand into these areas. You will be the main responsible for business segment applications, but also working across all segments as addressed by our customers. You will be responsible to, based on a close customer contact and the global as well as local Ericsson portfolios, define complete profitable solutions. The responsibility also means building and shaping our customers needs in order to create new business opportunities.

The successful candidate shall have a solid understanding on how our customers situation is changing as the internet goes mobile, as content and media goes mobile and what opportunities the emerging value chain of mobile internet will mean. Furthermore, we expect you to have a good understanding of Ericsson's applications portfolio as well as WAP, GSM, IP, UMTS and other enabling technologies.

Engineers - UMTS Test & Integration

Your tasks are the test, support and integration of new network-elements in 3G mobile and data networks in Germany.

You are responsible for field acceptance tests with the customers, do the trouble report handling and solve HW-, SW- and Configurations-problems. You will be the active interface for the back-office and implement (roll out) new HW- and SW-products. One of your tasks will be to support, introduce and to brief new colleagues and service partners.

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 configure 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 extensions 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 - O + M Systems

You will work with Support and Supply of Our TMOS-Software, which is used for the support of mobile and fixed telephony networks, from the user's and system administrator's perspective. Your tasks are customer specific integration as well as the execution of installation and integration tests and type acceptances. You will develop complex solutions for our customers on your own authority using the worldwide Ericsson network. Experience in working with TMOS products (OSS, SMAS) is a must.

Engineers - Core Network Mobile

You will work with Support and Supply of the Mobile Core Network nodes for UMTS and GSM, e.g. the Media Gateway (AXE or Call) and the MSC Server. You are responsible for the market verification of the new nodes. Our customer is one of the strongest players in the Telecommunication business. Therefore it is one of your biggest efforts to introduce new releases and products into the live network as one of the first markets worldwide. You will work very closely with the development projects.

You will also be responsible for supporting one of the biggest networks in the world. EDD is defined as a 'Stand Alone FSC', which means you will work closely together with the PLM nodes. You will be part of the 'Master Back Office' within ESME, so the other ESME countries will also use your expertise. Experience in working with Mobile Core products (MSC or UMTS) is a must.

Engineers - IP Datacom

Your tasks are the design, integration and implementation of complex solutions for our Networks & IP Service products. You will be mainly concerned with the newest Ericsson products for high performance backbones, broadband access and products for integration of new internet services as e.g. IP Telephony. On top of the below mentioned requirements you have good knowledge of LAN / WAN technologies and routing protocols.



and weekends) will also be required during the IMT-2000 FOA Project and for support purposes from time to time. For further details or to apply for a position above (please clearly indicate what position you are interested in) Contact the people nominated above.

ERICSSON TELECOMMUNICATIE B.V. NETHERLANDS

The Charging Competence Centre @ ETM hosts three Product Areas connected to the CAPC Sub Core Product Units Transit and FCAPS. We have charging as domain knowledge in wireline and wireless systems. Within The Netherlands, the Charging Competence Centre @ ETM is one of the R&D departments of the newly to be formed ELN (Ericsson Lab Netherlands). This R&D organization has a broad variety in products, varying from terminals for home communications to network software and applications.

The Charging Competence Centre @ ETM is within the division Research and Development responsible for the development of software applications made in C++ and JAVA. Within a worldwide operating product unit, we are responsible for developing FOS, an application on the Adjunct Processor (AP) that formats charging data and provides it to post-processing systems. The number of applications on the AP will increase over time. Further, we recently became responsible for setting-up an "application platform" on the AP based on software reuse. We use Object-Oriented development practices and a proprietary (home made) development process (IDIOM).

We are organised in self-steering teams, because we believe that eventually that is the most efficient, but also providing a working atmosphere. Teams are besides developing products also responsible for the detailed planning, for competence build-up and for developing as a team. Within the team every individual performs several tasks, what leads to a varied work package. Also contacts outside the team are of a crucial importance.

The Charging Competence Centre @ ETM guarantees a pleasantly open working environment, focus on personal development and challenging innovative work. We are looking for people who prefer to perform in a professional team.

Software Test Designer Object Oriented

● As a software test designer, you work in a multi-disciplinary team that is responsible for technical support to customers (also at the customer site), (use-case and integration-) testing of new software from projects, but also testing and maintaining already delivered software products.

We assume therefore that you don't object to occasional travels to support a customer. Your focus is on testing newly developed products, but you will also help out in other team activities. Furthermore, you are involved in inspecting documents from feasibility until delivery, to guarantee testability of the design and to build up competence of the product you will have to test. The testing procedures are described in detail in ID-IOM, our software development process, and an extensive testing environment supports your work.

We are looking for highly educated people with a technical (computer science or electronics) background, who have experience (2 years) with the profession of software test designer.

The most important characteristics of the job are: easily obtain an overview of the product to be tested, develop strategies for the testing of innovative products and persevere until all bugs present in the product have been found.

Further, we want you to be self-supporting, to have an analytical mind, the ability to abstract and to have experience in the telecom world. Knowledge of and experience with C++, JAVA, UNIX, WinNT and Object-Oriented design are preferred.

Software Designer Object Oriented

● Development teams form the basis for the Charging Competence Centre @ ETM organisation. These teams are responsible for developing packages for which the requirements and the end date are negotiated beforehand with the project manager. The team is responsible for designing, implementing and testing of the package, and besides this also for the detailed planning and tracking and for competence development of the team.

This last responsibility is aiming at having the competence also available in the future, necessary to satisfy the rapidly changing requirements of the market. We are looking for highly educated people with a technical computer science or electronics background.

We expect suitable candidates to have a minimum of 3 years experience in software design. Other required skills are familiarity with Object-Oriented development, C++, JAVA, CORBA, UNIX,

WinNT and a broad knowledge of telecom and internet applications. Specialisation to telecommunications is beneficial.

Contact: Erwin Sponselee,
Erwin.Sponselee@etm.ericsson.se, Manager Software Development. +31 161 249553, Charging Competence Centre@ETM, Rijen.

ERICSSON GMBH, DUSSELDORF, GERMANY - EDD

GSM Support Engineer

● We are looking for support engineers with a minimum of 3 years AXE/GSM experience, specialized in either the BSS or the CSS area. You will be working with a young international team in one of the two sections 'Radio Access Services' (BSC/BTS/RNC) or 'Core Network Mobile' (MSC/MGW/UMSC). The sections belong to the unit 'Customer Support Services, Ericsson Services Mid Europe'.

You will be responsible for support and supply activities for the radio and core network part of GSM, UMTS, IP BSS 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 customer in Germany is one of the strongest player in the Telecommunication business. Therefore 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 will be part of the 'Master Back Office' within ESME, which means that you will also support the other markets in mid Europe (Netherlands, Belgium, Switzerland and Austria) with your expertise. 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: Core Network: Mikael Strandberg, +49 211 5342359, Mikael.Strandberg@edd.ericsson.se, Radio Access: Harald Taug, +49 211 5342333, Harald.Taug@edd.ericsson.se.

ERICSSON DOMINICAN REPUBLIC

Local Product Manager

Market Unit Caribbean covers an area of 15 countries and 15 dependencies with some 27 million people. The telecom market is growing strongly with tough competition between operators. Several large global operators are present in the region.

● We are now looking for an experienced product manager for a new GSM client in Dominican Republic who can support the KAM in driving the sales and marketing activities, provide product strategic information and system proposals to offerings to the assigned client.

The candidate should have a good technical knowledge of cellular systems with a successful track record. Knowledge of 3G Mobile technology and Ericsson's datacom solutions is a merit. As for your personality, we expect you to have a drive for result and excellent interpersonal skills.

Fluency in English, Spanish is essential and knowledge in French desirable.

Contact: Mats Skoglund, General Manager Ericsson Dominican Republic, +1 787 771 1723, mats.skoglund@ericsson.com. Application: Noelia Borrego, HR Representative, noelia.borrego@ericsson.com.

ERICSSON INC. NETWORK ROLLOUT AND INTEGRATION, REGIONAL INTEGRATION CENTRE, AMERICAS

The Regional Intergration Center (RIC) for Datacom within EUS has responsibility for regional supply of Datacom services in the area of Network Rollout & Integration. We are looking to strengthen our team in the following key competence areas

Datacom Network Integration Engineers

● We have the mandate for Installation, Configuration and Integration of Datacom products in the Americas region. Our role is to support the market units in their effort to deliver Datacom solutions to their customers.

We are looking for dynamic, creative individuals with high technical skills. The ideal candidate would possess an excellent view of the product lines within Datacom as well as an overall concept of the technology. We are seeking the best technically business minded engineers for an extremely challenging and rewarding career with the RIC Americas - Datacom located in Dallas, Texas, USA.

We are seeking people with some of the following knowledge and experience: Mobile Telephony Systems (TDMA, and GSM). TCP/IP, Frame Relay, or ATM backbone. Unix (SUN Solaris) at a System Administrator level. SUN hardware at the Installation, Integration, and Troubleshooting level. Access products (AXI products, Cisco). GPRS technology.

Along with an comprehensive and attractive compensation package we also offer a great environment with vast opportunity to contribute to Ericsson's success. ONLY individuals with an uncommon sense of duty and pride NEED applying. We are looking for character... We are looking for a positive, and optimistic attitude. If you fit the above description. WE NEED YOU.

Contact: Ericsson Inc. USA, Recruiter Liz Ianace, RIC Americas for Datacom, Liz.Ianace@ericsson.com

ERICSSON EUROLAB IN HERZOGENRATH/AACHEN, GERMANY

Ericsson Eurolab in Herzogenrath/Aachen, Germany, is a dynamic, international Research&Development Center, located in the heart of Western Europe. We are responsible for development and integration of 3G core network, including the management of International Operations of Node Product Unit MSC.

Product Managers for GSM, UMTS and 3G IP Evolution

● Strategic product management for GSM, UMTS and 3G IP Evolution is done in co-operation with local product managers, core network product managers and system experts. The node product unit MSC strategic product management at EED in a new unit and belongs to the Core Network Mobile Systems international organization. The focus is on the MSC business and product aspects. Our tasks include MSC business planning, business cases, pricing, standardization strategies, product roadmap & plans, release responsibilities, product packaging, statements of direction, MSC meganetwork program, contract and tender support, and product presentations.

We participate actively in formulation of the 3G and All IP Architecture core network contents with our key customers and partners in Ericsson. We look primarily for experienced product or system managers who have a solid technical and business understanding of mobile solutions offered by Ericsson. We have positions open both in the MSC Product Planning and Business Management & Marketing sections:

MSC Program Manager

● MSC program manager has an overall responsibility for the planning of MSC product taking into account market requirements, business aspects, technical trends and standardization strategies. The program manager also inter-works with the development projects in order to get the created plans implemented in consecutive MSC releases.

MSC Meganetwork Program Manager MSC meganetwork program manager has responsibility for planning the introduction of high capacity and short time to customer concepts in MSC and networks in order to cope with the requirements according to the meganetwork study. The task requires a solid understanding of the whole time to customer flow.

MSC Strategic Product Managers

● MSC strategic product managers are responsible for defining product solutions with the close cooperation to market. They are also responsible for planning the development of product management areas related to the MSC product, considering the profitability over the product life cycle. The tasks include defining product strategies, development of product information, customer presentations and tender and contract support.

For further information concerning our unit, tasks and responsibilities, please visit our home page: <http://www.eed.ericsson.se/services/eed-x/x/welcome.html>

Contact: HR, Simon.Seebass@eed.ericsson.se, +49 2407 575-163, EED/X/X Frank Adelhardt, +49 2407 575-287, eedfad@eed.ericsson.se, EED/X/X Anna-Karin Hansson, +49 2407-575 7825, eedakh@eed.ericsson.se

The new international CAPC organization currently encompasses 20 design centers with the overall responsibility allocated at Ericsson Eurolab (EED) in Herzogenrath-Aachen, Germany. A total of 1.900 employees worldwide are responsible for the development of Transit & Network Access applications with focus on mobile telephony. CAPC serves the Product Units for UMTS, GSM, PDC, TDMA, NMT and all Fixed Local and Transgate systems.

Group Manager System Integration Test, 3G Systems

Proj.No 47/M00

● The general responsibility of the group manager is to plan, lead and supervise the operations of the group in EED/U/V. He/she has to guarantee that the required goals are fulfilled, the needs of the company are satisfied, the group is efficient and competitive.

The main authorities and tasks are to supervise testers and test leaders involved in CAPC sub-projects, to participate in improvement of test methodology, to assure that all communication is executed with highest integrity and quality, to implement personnel policies and general rules, to perform appraisals and frequent personal development talks and to participate in recruitment and introduce new personnel. You provide the department with resource plans and forecasts, coach individuals and participate in the EED/U/V Management Team.

As a suitable candidate, you are an Ericsson employee and should have a minimum of 4 years experience in AXE system test or function test. Managerial experience (e.g. as group manager, team leader or project manager) is a clear advantage.

System Trouble Shooters, 3G Systems

Proj.No 67/399

● The Verification Department in CAPC International Operations at EED is looking for a system trouble shooter. CAPC serves the Product Units for UMTS, GSM, PDC, TDMA, NMT and all Fixed Local and Transgate systems.

Your main authorities and tasks are to perform analysis of complex system faults and find a solution for these faults, on site support at different CAPC development sites and support project management in technical issues.

As a suitable candidate you have excellent knowledge in AXE and detailed knowledge in at least one mobile application, you are flexible, show initiative and have good communication & cooperation skills. The ability to work under pressure is also an important personal quality. Experiences from System Verification, Trouble shooting and/or Customer support are a clear advantage.

Test Environment - Engineers and Project Coordinator, 3G Systems

Proj.No 181/E00

● The Test -Environment and -Methods-Team is part of the CAPC verification department, which is in charge of CAPC verification management including test coordination of CAPC projects, system integration test of CAPC products and the responsibility of the CAPC test environment and test methods.

The "Test -Environment and -Methods Team" should support CAPC projects with Test Environment (TE) issues, this means mainly to take part in feasibility studies and provide support for STE and traffic tools. (MGTS, SCS/TTCN, SEA). We are also responsible for the long term Test Method and Tools strategy in CAPC (test improvements) in cooperation with the Ahead project.

Your main authorities and tasks are to coordinate activities in the Simulated Test Environment (STE) and target environment for CAPC projects, to run trials for new test methods, to run system and verification tool studies for the requirement handling, to support test tools and to support project management in TE issues.

As a suitable candidate you have good knowledge mobile telephony systems, you have function test or system test experience for AXE products, you are flexible, show initiative and have good communication & cooperation skills. We are working in a small team, which means you must be able to handle different tasks in parallel. Experiences from STE test-tools and traffic generators (MGTS, SCS/TTCN) are a clear advantage

System Test Engineers, 3G Systems

Proj.No 66/399

● Your main authorities and tasks are to define the prerequisites to perform verification of the test

object on CAPC level, in both target and simulated environment, to perform test execution and reporting of the results, to do trouble shooting and to support the different applications in their INDUS and FOA activities.

As a suitable candidate you have good knowledge of mobile tele systems, you are flexible, show initiative and have good communication & cooperation skills.

The ability to work under pressure is also an important personal quality.

Furthermore, fluency in written and spoken English is required. Experience from System Verification/Test is a clear advantage.

Contact: EED/U/VC Anneli Oscarson, Anneli.Oscarson@eed.ericsson.se, +49 2407 575191, EED/U/V Franck Emmerich, Franck.Emmerich@eed.ericsson.se, +49 2407 575-7700, HR, Simon Seebass, Simon.Seebass@eed.ericsson.se, +49 2407 575-163

UMTS/CAPC Group Manager System Integration Test

Proj.No 47/M00

● The Verification Department in CAPC International Operations at EED is looking for a Group Manager of the Test Group taking care of System Integration activities in CAPC development projects.

The general responsibility of the group manager is to plan, lead and supervise the operations of the group in EED/U/V. He/she has to guarantee that the required goals are fulfilled, the needs of the company are satisfied, the group is efficient and competitive.

The main authorities and tasks are to supervise testers and test leaders involved in CAPC subprojects, to participate in improvement of test methodology, to assure that all communication is executed with highest integrity and quality, to implement personnel policies and general rules, to perform appraisals and frequent personal development talks and to participate in recruitment and introduce new personnel.

You provide the department with resource plans and forecasts, coach individuals and participate in the EED/U/V Management Team.

As a suitable candidate, you are an Ericsson employee and should have a minimum of 4 years experience in AXE system test or function test. Managerial experience (e.g. as group manager, team leader or project manager) is a clear advantage.

Contact: CAPC Verification Department: EED/U/VC Anneli Oscarson Anneli.Oscarson@eed.ericsson.se, +49 2407 575191, EED/H/RC Simon Seebass, Simon.Seebass@eed.ericsson.se, +49 2407 575163.

UMTS/CAPC, Test Environment - Engineer and Project Coordinator

● We are looking for a new member in our "Test - Environment and -Methods" Team. The team is part of the CAPC verification department, which is in charge of CAPC verification management including test coordination of CAPC projects, system integration test of CAPC products and the responsibility of the CAPC test environment and test methods.

The "Test -Environment and -Methods Team" should support CAPC projects with Test Environment (TE) issues, this means mainly to take part in feasibility studies and provide support for STE and traffic tools. (MGTS, SCS/TTCN, SEA). We are also responsible for the long term Test Method and Tools strategy in CAPC (test improvements) in cooperation with the Ahead project.

Your main authorities and tasks are: Coordinate activities in the Simulated Test Environment (STE) and target environment for CAPC projects. Run trials for new test methods. System and verification tool studies for the requirement handling Verification of the test environment as well as tool and system support. Support project management in TE issues.

As a suitable candidate you have good knowledge mobile telephony systems, you have function test or system test experience for AXE products, you are flexible, show initiative and have good communication & cooperation skills.

The ability to work under pressure is also an important personal quality. In this role you will always be involved in the latest technology used within CAPC.

We are working in a small team, which means you must be able to handle different tasks in parallel. Experiences from STE test-tools and traffic generators (MGTS, SCS/TTCN are a clear advantage).

Contact: EED/H/R Simon Seebass, Simon.Seebass@eed.ericsson.se, +49 2407 575 163, EED/U/VC, Anneli Oscarson, Anneli.Oscarson@eed.ericsson.se, +49 2407 575 191.

UMTS/CAPC System Test Engineers

Proj.No 66/399

● Your main authorities and tasks are: Definition of the prerequisites to perform a verification of the test object on CAPC level, in both target and simulated environment. Performing test execution and reporting of the result. Trouble shooting. Support the different applications in their INDUS and FOA activities.

As a suitable candidate you have good knowledge of mobile tele systems, you are flexible, show initiative and have good communication & cooperation skills.

The ability to work under pressure is also an important personal quality.

Furthermore, fluency in written and spoken English is required. Experience from System Verification/Test is a clear advantage.

UMTS/CAPC System trouble shooters

Proj.No 67/399

● The Verification Department in CAPC International Operations at EED is looking for a system trouble shooter. CAPC serves the Product Units for UMTS, GSM, PDC, TDMA, NMT and all Fixed Local and Transgate systems.

Your main authorities and tasks are: Perform analysis of complex system faults and find a solution for these faults. On site support at different CAPC development sites. Support project management in technical issues.

As a suitable candidate you have excellent knowledge in AXE and detailed knowledge in at least one mobile application, you are flexible,

show initiative and have good communication & cooperation skills.

The ability to work under pressure is also an important personal quality.

Experiences from System Verification, Trouble shooting and/or Customer support are a clear advantage.

Contact: CAPC Verification Department: EED/U/VC Anneli Oscarson Anneli.Oscarson@eed.ericsson.se, +49 2407 575191 or EED/U/VC Franck Emmerich, Franck.Emmerich@eed.ericsson.se, +49 2407 5757700, EED/H/RC Simon Seebass/Simon.Seebass@eed.ericsson.se, +49 2407 575163

Contact: EED/H/R Simon Seebass, +49 2407 575 163, EED/U/VC Franck Emmerich, +49 2407 575 7700, EED/U/VC Anneli Oscarson, +49 2407 575 191, Simon.Seebass@eed.ericsson.se

For more information see: <http://capc.ericsson.se>.

NIPPON ERICSSON K.K.

Bilingual Datacoms Engineer

● We presently have vacancies for experienced Customer service System Support engineers in the area of Datacoms.

Your tasks will include the responsibility of helping us to establish a Datacoms Support group at NRJ.

Requirements :Fluency in both Japanese and English (Non Japanese speakers need not apply). Strong knowledge in Routers, switches and Access products. CISCO Certification would be a strong plus in favour of your application.

Conditions: Excellent conditions (salary, housing, international schooling etc.)

The whole world is eagerly awaiting the arrival of a new Telecoms dawn in the land of the rising sun, so why not be there when it arrives.

Application: Anthony Bradshaw, System Support Manager, anthony.bradshaw@nrj.ericsson.se.



Q-Cell is organised around an innovative, non-hierarchical, team-based structure that gives freedom, empowerment and equal opportunities to all employees. Q-Cell's employees manage themselves on a day-to-day basis and the unique transparency in the way the company is run, offers the opportunity for involvement and contribution to business initiatives which are aimed towards Q-Cell's success.

Applicants should have experience of AXE, plus areas such as:

- OOD
- UML
- C++
- Java
- COM
- Scripting languages

SOFTWARE ENGINEERS

AXE DESIGN ENGINEERS SOFTWARE TEST ENGINEERS SYSTEMS EXPERTS

DO YOU WANT TO SHAPE THE FUTURE OF THE EMERGING TECHNOLOGIES?

Q-Cell is the exclusive software engineering and development unit of Q-Labs. Based on Ericsson's top performing software design centre, Q-Cell was established in August'99 with a clear mission; to create successful software development and end-to-end support partnerships with world class vendors. Q-Cell's vision is to become the new model of best practice of the software engineering industry world-wide.

With operations across Europe and North America, Q-Labs is considered as the no.1 software engineering professional services specialist world-wide. Our extensive customer portfolio includes Ericsson, Alcatel, R.Bosch, Siemens, ABB, and IBM(UK).

Situated in West Sussex, served by the London-Brighton railway service, within easy access of the A23/M23 and Gatwick airport, Q-Cell can claim an ideal location for both business and employee accommodation choice.

The primary driving forces behind our decision to grow are, our successful performance, our employees ambition to take part in shaping the future of the emerging technologies and the ever challenging market demands. We invite YOU to play an important role amongst us.

UMTS, IN, TCP/IP, VoIP, WAP, EPOC, IVRS, ACD, Databases, Dynamic web-based systems, ...

For further information please contact Mel Cohen
Tel. +44 (0)1444 460028, mel.cohen@q-labs.co.uk

Q-Labs
www.q-labs.com

Chance to vote on ERICA

► Which organization do you think has done the best job at using the Internet to implement positive change in the world? When the ERICA prize (Ericsson Internet Community Award) is awarded for the third time, you will have the opportunity to participate in voting for the "People's Choice." The winner will receive USD 20,000 worth of hardware.

The ERICA prize, which was established to support charitable or-

ganizations that use the Internet in innovative ways, has been awarded twice before. The five winners, who will share Web development and technical assistance worth USD 500,000, will soon be announced.

This year, the general public will have an opportunity to be involved and vote on their favorite. Visitors to the ERICA Website can select their favorite through September 29.

Twenty organizations, out of

some 600 who entered, were chosen as finalists. They come from all over the world.

Among the applicants is Project Concern International, which assists more than three million needy families in Zambia, providing clean water and nutritious food. They hope to create a system that will link up aid organizations all across Zambia, a country that will have an estimated 1.6 million orphans by

the end of the year, as a result of the HIV/AIDS epidemic.

The Fiji School of Medicine is another organization vying for the prize. Due to the vast distances in the Pacific Ocean, they would like to establish a website for medical training and consultations.

The winners will be announced on October 17.

www.ericsson.com/erica

Hold on to those phones!

► In issue 13 of Contact we wrote about Jan-Olof Andersson, who brought his T28 back to life after sending it through the washing machine. That story prompted Andrés Mauricio Torres, of Ericsson in Colombia, to write.

Torres dropped his KF788 phone out of a taxi and into a gutter where it came to rest in a culvert, where it lay immersed in water for 40 minutes before he was able to retrieve it. Needless to say, it no longer worked. However, after letting it lay outside in the sun for two days, the phone started working again.

"Unbelievable, a miracle," writes Andrés Mauricio Torres.

Apparently, the sturdy new R310 arrived on the market just in time.

TV collaboration with Jarowskij

► The Swedish television production company, Jarowskij, and Ericsson will jointly be launching a new TV format this autumn. The new format will enable viewers to watch TV and, by using a WAP phone, play games with family and friends.

Jonas Degerth, customer relations manager at Ericsson Sweden, says, "We believe that games and entertainment are among the main areas that will propel the development of mobile Internet."

ERIC & SON



GENERATING SOLUTIONS

For high capacity networks

Through its leadership in SDH broadband radio-link systems, Nera has become the natural business partner with Ericsson, providing total solutions for high capacity wireless networks around the world.

With the ever increasing demand for mobile communications in both voice and data, the ability for rapid installation and commissioning of new networks is crucial to meeting that demand.

To that end, there exists an OEM agreement between Ericsson and Nera that is managed by Ericsson's Product Unit Optical Networks Group in Horsham, UK.

Moreover, Ericsson and Nera are working successfully together on a number of major high capacity radio-link network projects including:

- Large scale development of Poland's mobile phone network
- Construction of a new SDH backbone mobile phone network in Morocco
- Supply of SDH radio-link equipment and services for the metropolitan area in Bogota, Colombia and a high capacity network in Sao Paulo City, Brazil

For the cost-effective total solution to high capacity radio-link networks, one call to Nera from Ericsson was all it took.

WITH ERICSSON

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citylink@nera.no website: http://www.nera.no

CHANGING THE WAY WE COMMUNICATE

NERA
TELECOMMUNICATIONS



Collecting unused bags is perhaps not the first thing that comes to mind when flying. But that is exactly what Rune Tapper does. He has assembled almost 200 during his travels.

Photo: Johan Ardefors

Website stays clean

There are three ways to get people to visit a website. You can either include pornography, mp3 files or something really strange, at least according to Rune Tapper's theory. When he constructed his website, he wasn't attracted by either of the first two alternatives.

Instead, he decided to make a website about airline vomit bags.

► Rune Tapper works as a radio technician at Ericsson in Kumla. That operation was recently sold to Telenor, however, and is now known as Telenor Radio Systems, even though the company works exclusively on Ericsson products.

He sounds almost a little embarrassed when Contact calls him up. It wasn't really my intention that there would be so much attention, but after starting out with a mere five vomit bags two years ago, "just for fun," Rune Tapper now has around 200 bags.

"Suddenly e-mail started pouring in from collectors. I couldn't believe it was true," he says about how it felt to be contacted by similar-minded people.

How did it really start?

"Well," says Rune contemplatively, "you want to have a souvenir from your plane trip. You sit there and see three things: the airline magazine, the vomit bag and the safety brochure. The airline magazine is really boring and you're not allowed to remove the safety brochure.

In Germany, there is a collector who

claims to have 1,500 bags, and sure there are rarities, just like in stamp collecting.

"Rumor has it that there is a vomit bag from Air Force One (the American president's plane), but I have never seen any," says Rune Tapper.

Bags from the former Swedish Linjeflyg airline are "priceless." Pan Am bags are also highly valued among the ranks of collectors.

One should perhaps clarify that Rune Tapper collects unused bags. He has only been forced to use one once, when he was a child.

And his collection just continues to grow: "My colleagues just shake their heads, but when they have been out travelling, they bring me their vomit bags."

Jesper Mothander

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http://flytto/barfbag

UPCOMING

October 15-17: GSM Global Summit in Monaco

November 14: Kurt Hellström is one of the main speakers at the Comdex trade show in Las Vegas. The show runs from November 13-17. Ericsson's presence there is an indication the company has now also become a player within the computer world. Microsoft's Bill Gates and Dell's Michael Dell will also be speaking.

December 4-9: For those of you planning on attending Telecom Asia, this autumn's really large telecom trade show, it is time to book your ticket now. The event will be held in Hong Kong under the leadership of the ITU.

inside.ericsson.se/asiatelecom00

UPDATES

For the first time ever, Ericsson demonstrated streaming video live on a prototype WCDMA phone at the Networks Telecom trade show in Stockholm.

Ericsson held a seminar in Japan for some 40 component manufacturers, in an effort to more closely tie the suppliers to the company.

NEW ASSIGNMENTS

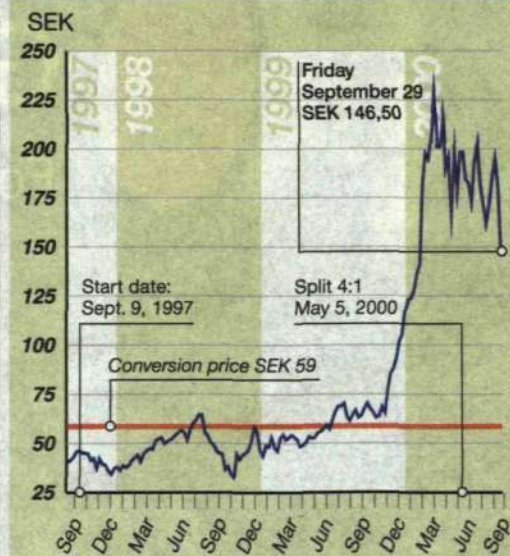
Johan Ljungqvist is leaving Ericsson effective October 1, after six years, to return to independent consulting. Johan Ljungqvist was head of internal communications at Ericsson.



Several of the functions at the Mobile Systems Division have received new managers: Jan Ögren, controller, Pär Altan, communications, Mats Blumentberg, head of marketing and strategic business development, Crister Ek, supply and IT, Stig Rune Johansson, technology.

Gösta Ask, Ericsson Radio Systems, has been named senior specialist within the field of Test Languages and 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>

