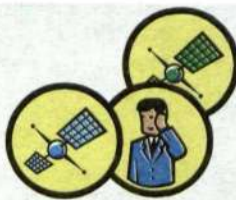


Lack of airwave space

American airwaves are filled with older wireless systems. The shortage of space is making it difficult to find available frequencies for third-generation mobile telephony. But radical measures are now being implemented by private industry and public authorities. **8-9**



Successful combination

Ericsson has demonstrated a successful combination of the CDMA2000 standard 1xEV-DO, due for launch next year, and WLAN technology for wireless local data networks. The solution will guarantee users optimal connections regardless of their location. **Technology, 19**

contact



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First shared 3G-net

The world's first shared UMTS-network is being built in Sweden. Svenska UMTS Nät AB, a company owned jointly by Telia and Tele2, has chosen Ericsson as sole supplier of the equipment.

"This is a historic milestone. We can now extend our list of pioneering technical accomplishments for which we have been first in the

global telecom market," says Torbjörn Possne, manager of the WCDMA/PDC business unit of division Mobile Systems.

Operators can save as much as 40 percent of initial costs by sharing their networks with one or several operators. Ericsson offers three different technical solutions for shared networks.

News, 4

Implementing savings program

The efficiency program has now been running for three months. The plan is set regarding how cost cuts of 20 billion Swedish kronor will be made, but the main task remains – to carry out the program. Get an update on the market area activities. **Feature, 16-17**

Divisions merge

Aiming for a more streamlined and focused organization, Ericsson will integrate division Multi-Service Networks and division Data Backbone and Optical Networks into one division called Multi-Service Networks. "This will lead to a simpler organization and strengthen Ericsson's commitment to shaping the broadband multi-service network market," says Einar Lindquist, who will lead the combined division. **News, 7**



Three framework agreements valued at USD 850 million have been signed with operators in Jiangsu Province in China. "We selected Ericsson because we have tremendous confidence in the company," says Hui Liang Yu, Party Secretary in Jiangsu, who met recently with Ericsson's CEO Kurt Hellström to sign the agreements. Pictured at left is Jan Malm, President of Ericsson in China. Photo: Rolf Adlercreutz

Major orders in China

Ericsson has secured three important framework contracts in the rapidly expanding Chinese market. Booked by China's three most important operators, the orders are valued at USD 850 million over a three-year period.

"China is on its way to becoming Ericsson's largest market," says Jan Malm, President of Ericsson in China. **News, 5**

MARKET REPORT

Ericsson in Austria is expanding. After 10 years of hard work, the company has penetrated the market for mobile systems by securing two UMTS-contracts. At the same time, Vienna is becoming an increasingly important hub for Ericsson Enterprise.

"There is a great deal of activity here today," says Kjell Johansson, head of Ericsson in Austria. **12-14**

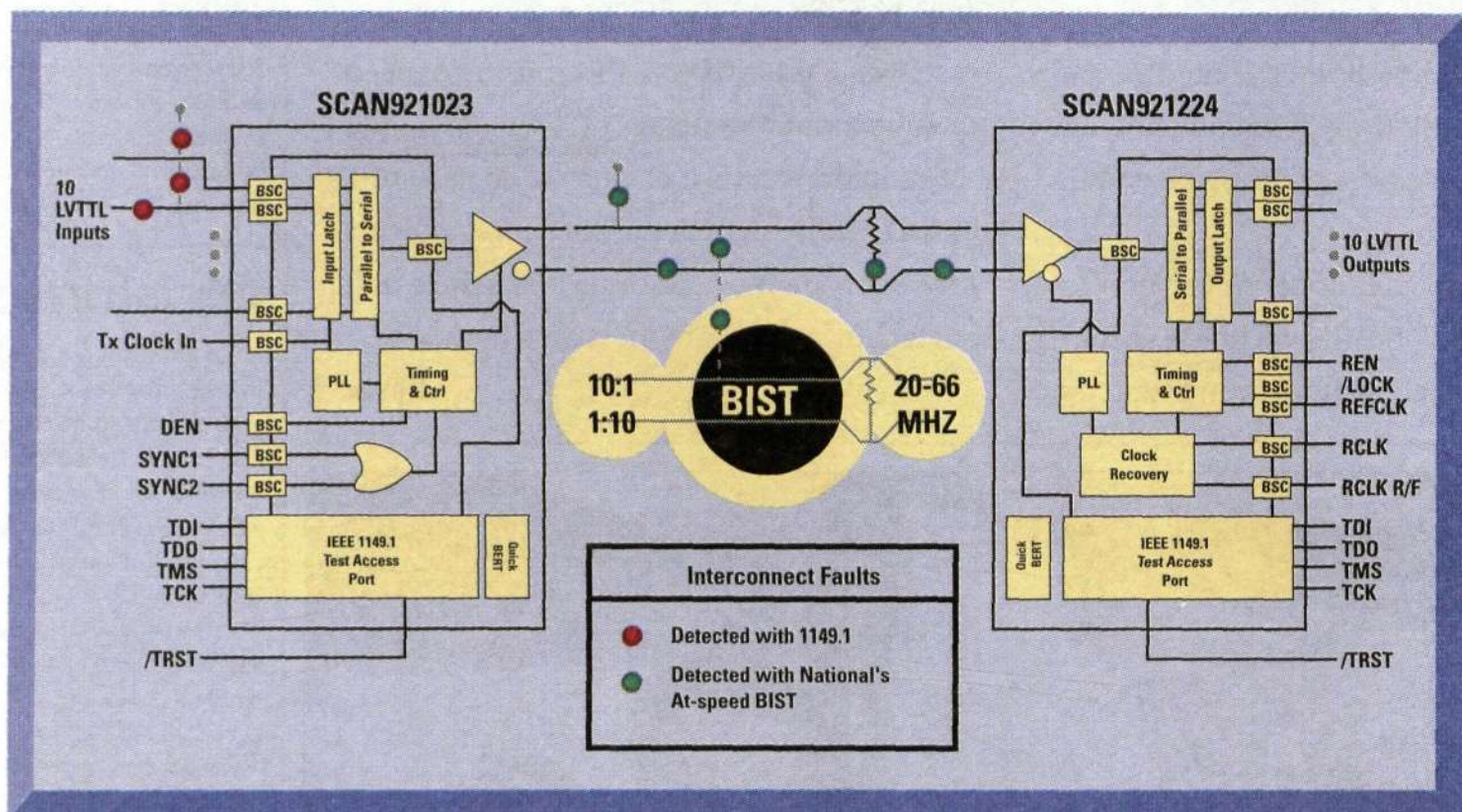
AT WORK


When Katharina Praschl first learned she was pregnant, she thought she would have to leave her job at Ericsson in Austria. But with the help of different practical solutions to combine her parental role with her career, the company has encouraged her to come back to work. **20-21**



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An expansive winner

The Telecom Management & Professional Services (TM&PS) business unit within division Global Services is growing at a rate of knots. While most units within Ericsson are reducing their profit forecasts for 2001, TM&PS estimates that it will increase sales by 80 percent.

► During the past year, Telecom Management & Professional Services has grown more than most other units within Ericsson. Since it was started on July 1, 2000, the business unit has increased its sales by slightly more than 120 percent. Last year, added-value services and systems solutions for Mobile Internet were sold for nearly USD 180 million. And this success is holding strong. Earnings for the first quarter of this year showed no signs of slowing down despite the fact that large portions of the telecom industry are encountering financial turbulence.

"We certainly cannot complain. Thanks to some ground-breaking contracts over the past months, we are in a very favorable business position, particularly in Asia and Western Europe," says Ingvar Larsson, who heads the business unit.

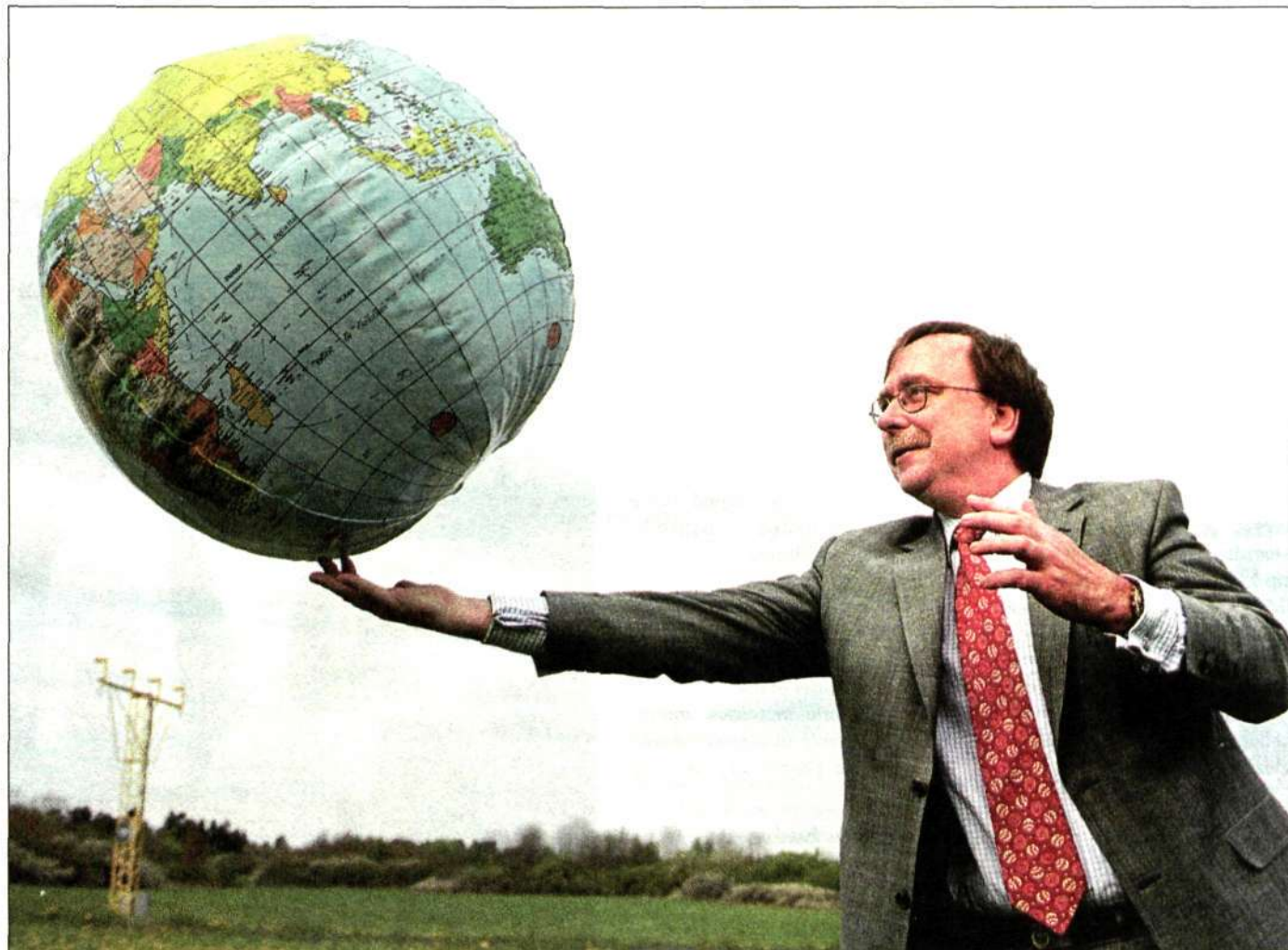
Business is going particularly well with regard to sales of services and solutions that help 3G operators to safeguard the quality of traffic on their networks, known as Network Management. Several strategically important contracts have been secured recently with, among others, the operators Telecom New Zealand, Tele Spasio of Italy, J-Phone in Japan and Telcel in Mexico.

No guaranteed success

Success was, however, far from guaranteed when the unit began operations a year ago.

"Of course, Ericsson does have a long and solid tradition of customer service, but when we began, the company had no experience of how to make money on these kinds of services. Apart from this, several of our competitors were already established within the service and support sector," says Ingvar Larsson.

"We have abandoned the traditional Ericsson



The Telecom Management & Professional Services business unit is becoming an increasingly larger player in the world market. Since it began less than a year ago, sales have grown by 120 percent. Ingvar Larsson, who heads the business unit, expects continued success during 2001, above all in Asia and Western Europe.

Photo: Rolf Adlercreutz

son approach to sales, that is to say, by presenting a product and then hoping that the customers will buy it. Instead, we are helping the customer all the way, so that they can save or earn money from their networks.

The initial period was a hectic one for Ingvar Larsson and his colleagues.

"To make up for lost time, we have had to work at very high speed and, from the beginning, our operations were a little overgrown and sprouting in all directions," he says.

However, in pace with the orders being received, the focus of the unit has been sharpened. On March 1 this year, the unit was also strengthened by the addition of 900 people from the former division Internet Applications and Solutions. Today, the unit, with nearly 4,000 employees, is a real player in its field.

Growing despite downturn

"Naturally, the downturn in the telecom industry has brought about tougher competition and customers do not have as much money. Despite this, I view the future with confidence.

We have several interesting deals in the making within areas that are highly prioritized by customers and I expect that we will be able to grow by a further 80 percent this year," says Ingvar Larsson.

At the moment, operators are primarily interested in total solutions that can help them save money and secure their earnings.

"Our solutions within Revenue Assurance are extremely popular. This includes our Fraud System, which ensures that operators are not fooled by subscribers who attempt to make phone calls free of charge," he says.

Despite continued success, division Global Services' savings requirement of USD 90 million this year will also affect Telecom Management & Professional Services.

"We are reviewing our operations with a view to working smarter. Today, some administrative tasks are needlessly carried out twice or three times and we must become more efficient in this," says Ingvar Larsson.

Jenz Nilsson

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FACTS/TELECOM MANAGEMENT & PROFESSIONAL SERVICES

Created July 1, 2000, as one of four business units within the Global Services division.

The unit is currently the telecom industry's largest organization for service and systems integration for mobile Internet, in terms of num-

ber of employees. Telecom Management & Professional Services develops and supplies added-value services and systems solutions for Ericsson's customers.

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LAYOUT AND WEB DESIGN

Paues Media, +46 8-665 73 80

PRINTED AT

Nerikes Allehanda Tryck,
Örebro, 2001

CONTACT ON THE WEB:

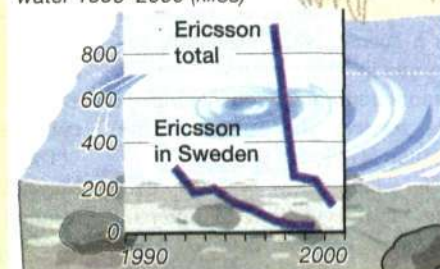
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Sweden has first shared 3G-network

Svenska UMTS Nät AB, a company owned jointly by Telia and Tele2, has announced its selection of Ericsson as sole supplier for its UMTS network in Sweden.

This is the first UMTS-network in the world for which two operators have joined forces to build a "shared" 3G network.

Having close relations with its Swedish customers has always been important to Ericsson. Svenska UMTS Nät's decision to select equipment supplied by Ericsson is a confirmation of this priority. Sweden is an important market, a country in which about 84 percent of all mobile subscribers are Telia and Tele2 customers.

"The announcement also carries a certain degree of historic importance, since it will be the world's first shared network for UMTS. We are now able to lengthen our list of pioneering technical accomplishments for which Ericsson has been first in the market," says Torbjörn Possne, manager of the WCDMA/PDC business unit of the division Mobile Systems.

Can save up to 40 percent

Many operators have paid a very high price for their 3G licenses and, in some cases, they are now experiencing difficulties in financing investments for 3G systems. Calculations have shown that operators can save as much as 40 percent of initial investment costs by sharing their networks with one or several other operators.

"Shared 3G-networks and the services they offer can be created more quickly for larger groups of subscribers," says Torbjörn Possne.

Shared networks offer substantial savings for Ericsson.

"We have a large number of networks scheduled for rollout in a short period of time, a process that involves both installation and implementation."

Ericsson has developed three solutions for shared 3G networks that can be combined in many different ways. This does not mean that the operators have to cooperate with each other forever, however.

As the number of users rises and network traffic increases, operators will be able to convert shared networks to proprietary network operations.

Creates new business

Many people believe that shared networks will result in lower equipment sales by Ericsson.

"That is not the case. On the contrary, shared networks enable operators to implement their systems more quickly and provide widespread coverage from the start. In parallel with growth in the number of users and services offered, the networks will have to be expanded, and Ericsson will then sell even more equipment. In fact, shared networks might become one of the keys to support a definitive breakthrough for the 3G market," concludes Torbjörn Possne.

Gunilla Tamm

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It was all smiles at Ericsson Sverige AB when Svenska UMTS Nät AB named Ericsson as sole supplier for its 3G network. Svenska UMTS Nät will build the world's first shared 3G network. Left to right: Robert Puskaric, Stefan Lindqvist, Samuel Sundström, Staffan Henriksson, Richard Anell and Pär Backlund.

Photo: Ecke Küller

Ericsson a pioneer in sharing

Solutions that enable operators to share telecom networks are nothing new for Ericsson. As early as 1995, a solution was available for operators to share 2G networks and, two years ago, Ericsson had developed solutions for sharing WCDMA systems. Today, the company offers three basic solutions that can be combined in different ways.

Public authorities that grant licenses in different countries work under different rules and regulations. In some countries, operators are required to build complete proprietary networks in order to be considered for a license, while regulatory authorities in other countries believe it is more important to offer competitive services that stimulate the creation of different services.

"It seems likely, however, that rules and regulations in different countries will be defined more clearly," says Lambert Beekhuis,

who works with product marketing for the Core Networks product unit.

He mentions Germany as an example, where licensing authorities are now reviewing their regulations. In the Netherlands, where five licenses have been awarded, all five operators have also met to discuss shared 3G networks.

There are three solutions available today for shared networks, with each solution offering its own special advantages. Opportunities are also available to combine the different solutions.

The first, a Common Shared Network, is summarized briefly as a solution in which the entire radio access network and core network are shared. The individual opera-



Lambert Beekhuis

tors, however, retain their own Home Location Registers, billing systems and Internet/intranet and similar functions for subscriber management.

The second solution for shared networks is called Geographical Split Network, a structure in which every operator has its own network that offers coverage in certain areas. One operator, for example, might

have a network in the north and another in the south. Since subscribers are able to roam in the networks, coverage is expanded.

In the third solution, Shared Utran, the radio access network for WCDMA is shared and all the operators have their own core networks.

All of Ericsson's solutions support "handover" between shared networks, as well as "handover" to existing

GSM-networks of operators in the shared networks.

"The solutions make it possible for as many as six operators to share a network. It is also possible to combine the solutions in a wide variety of different options based on the needs of the operators," says Lambert Beekhuis.

Gunilla Tamm

Ericsson leads 3G-league

In mid-June, 33 operators had selected Ericsson as their 3G-supplier for UMTS systems equipment. In several countries, two or three operators will select equipment from Ericsson.

According to the latest 3G reference list, 33 operators, most of which have already been granted licenses, have

selected Ericsson as their supplier. Mobitel in Slovenia, an operator that has not yet been granted a license, has also chosen Ericsson as its supplier.

In Germany, Spain, Finland, Italy, the Netherlands and Portugal, three operators in each country have selected Ericsson as their supplier.

Most operators that have selected Ericsson as their 3G supplier have

chosen WCDMA as their radio network solution, while Leap Wireless of the US has opted for CDMA2000.

With 33 commercial UMTS agreements out of a total of about 50, Ericsson is the leading company in terms of most contracts from players in the 3G market.

Gunilla Tamm

Large orders in China

China's telecom market is characterized by dynamic growth, and Ericsson is booking one major contract after another. The current trend was strengthened in June when Ericsson received three important framework contracts valued at USD 850 million from telecom operators in Jiangsu Province.

"The value of these orders represents a very substantial amount of money, despite their distribution over three years. The orders are a clear indication that these important customers want to cooperate with Ericsson in the future," says Jan Malm, President of Ericsson in China.

The customers Jan Malm is referring to are China Telecom, the most dominant fixed-network operator in China, and the country's only two mobile operators, China Mobile and China Unicom. The branch offices of China's two mobile operators in the economically advanced Jiangsu Province recently signed framework agreements with Ericsson for deliveries of network equipment over a three-year period.

Fastest growing market

With 4.5 million new subscribers every month, China is the world's fastest growing mobile telephony market. The latest statistics from May 2001 show a mobile penetration level of slightly more than 8



The contracts from operators in Jiangsu Province are valued at USD 850 million. Here Björn Boström, Ericsson, and Qian Zhixin, Jiangsu Development and Planning Commission, are signing the important documents.

Photo: Rolf Adlercreutz

percent. The country's fixed telephony sector is also increasing strongly, with about 3 million new subscribers every month. To meet growing market demand, Chinese telecom operators are expanding at a rapid pace, often with equipment supplied by Ericsson.

"We have a 40-percent share of the market for mobile infrastructure in China, which is equal to the combined market shares of Nokia and Motorola," says Jan Malm.



Jan Malm

According to most indications, China will surpass the US this year

and become Ericsson's largest market.

"As other telecom markets decline, China is the glaring exception to current global trends," Jan Malm continues.

Jan Malm was appointed to his present position as President of Ericsson in China on December 1, 2000. He has worked in various management capacities in China since 1995, however. He says that people talking on mobile telephones are now a common sight on the streets of China's cities and towns.

While the utilization of mobile data services remains in the embryonic stage of development, there is widespread interest in the new technology and many new compa-

nies focused on development of data services are beginning to emerge. Jan Malm also believes the potential for development of mobile data services is strong, based on experience gained from development of paging systems, which are now widely used in China.

"People who work with paging systems have learned from first-hand experience and will be able to design new services that will be easy to use," says Jan Malm.

Mobil service portal

In the second half of 2001, China Mobile plans to launch a mobile services portal called Monternet, which has been called China's answer to Japan's i-Mode services. Based on GPRS, the Monternet portal will be launched throughout China. Ericsson was contracted as the portal's supplier of GPRS networks and Service Net products.

Ericsson has obviously achieved significant success in China, but the company also faces some challenges. In the mobile terminal sector, Ericsson's market share has fallen to about 10 percent, from more than 30 percent in 1997.

"We are trying to reverse the trend and recapture market shares. The new models due for launch later this year will hopefully generate stronger sales," concludes Jan Malm.

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FACTS/CHINESE OPERATORS

Government-owned China Telecom has virtually total dominance in China's fixed telephony market. A few smaller fixed-network players have established operations during the past few years, including Jitong, a privately owned operator, and government-owned China Netcom and China Railway. There are two operators in the mobile market: China Mobile and China Unicom, which have subordinate departments in all 22 provinces. Discussions are now in progress to determine how China Telecom will be split up between government and private ownership interests to increase competition.

FACTS/MANY CONTRACTS IN CHINA

In addition to the three new framework agreements, Ericsson has secured 16 contracts during recent months for deliveries of GPRS, GSM and IP-backbone systems in China. The orders are valued at more than USD 150 million and comprise the following projects:

- Sichuan Unicom and Gansu Mobile are expanding their GSM 900 networks. The networks cover parts of western China, a region with about 100 million inhabitants. When the work is completed later this year, the networks will provide

coverage for 5.3 million subscribers.

- Sichuan Mobile, another telecom operator, is increasing the capacity of its GSM 900 network.
- Ericsson will deliver GPRS networks to Shanghai Mobile. The system will have the capacity to serve 30,000 subscribers and will be ready for commercial operations in June of this year.
- Eight contracts for deliveries of backbone networks for data traffic, IP-backbone, have been received. The contracts include

routers and solutions for networks in metropolitan areas.

- Ericsson has been contracted to expand Jiangsu Telecom's fixed network to establish a multi-service network with AXE-10. Valued at more than USD 17 million, it is the largest AXE contract booked by Ericsson in China in the past five years. Beijing Telecom has also placed an order for AXE-10.
- Chongqing Mobile and Sichuan Mobile have selected Ericsson's MINI-LINK to offer their customers wireless broadband.

3G contract signed in Australia

Ericsson has been selected as principal supplier for Hutchison Telecom's 3G network in Australia.

The contract is valued at approximately USD 435 million.

This is Ericsson's first 3G contract in Australasia and the 32nd WCDMA commercial agreement so far for Ericsson globally.

The contract includes a 3G network with radio access network, IP core network and transmission technologies. It also comprises ad-

vanced network management systems, network operations, Mobile Internet application platforms and terminals. Motorola will provide the Radio Access Network (RAN) in the Sydney and Brisbane areas.

The network will be rolled out for commercial launch toward the end of 2002 or early 2003.

"Hutchison is a global leader in 3G. Our licenses cover over 170 million subscribers worldwide," says Canning Fok, Chairman of Hutchison Telecommunications (Australia) Ltd. and Group Managing Director of Hutchison Whampoa.

"Partnering with Ericsson and Motorola in Australia ensures we have the synergies and technological strength to build our network in the fastest and most cost efficient way."

Karl Sundström, Managing Director of Ericsson in Australia, says:

"Hutchison Whampoa has been instrumental in defining the global 3G environment by being one of the first carriers to embrace the market potential of 3G. We are delighted to be working so closely with them to realize the potential of 3G."

"Hutchison is no doubt one of

the most committed and focused 3G global operators in the world, holding 3G licenses also in the UK, Italy, Sweden and Austria," states Kinson Loo, Managing Director of Ericsson's Global Account for Hutchison.

"Ericsson is fully committed to support Hutchison with our world-leading end-to-end 3G solutions to ensure a strong and successful 3G business for Hutchison."

Lotta Muth

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Ericsson to build Hi3G's network

Ericsson has signed a letter of intent with Hi3G Access to supply a 3G (WCDMA) network in Sweden. As Ericsson's 33rd commercial UMTS agreement in the world to date, this deal confirms Ericsson's leading position in mobility, and 3G solutions. The deal broadens Ericsson's cooperation with Hi3G (a joint venture between Hutchison Whampoa and Investor AB) and companies within the Hutchison 3G group, concerning the development of strategic applications and services. The letter of intent with Hi3G includes supply of the complete Core Network and a major part of the Radio Access Network, including Base Stations and Base Station Controllers.

"Ericsson will be a long-term strategic partner and I am confident that we can create the leading 3G service in Sweden", says Chris Bannister, CEO of Hi3G.

Investor raises its stake in Ericsson

Investor AB has raised its ownership interest in Ericsson and SEB through the purchase of shares held previously by the Knut and Alice Wallenberg Fund (KAW) and the Marianne and Marcus Wallenberg Foundation (MMW). At the same time, the two foundations acquired all shares previously held by Investor AB in Stora Enso, SKF and SAS. The value of the transactions amounts to USD 1.2 billion.

Investor referred to its strategy to realign its portfolio and focus on companies in selected areas with strong potential for business growth and higher earnings.

"Our strategy is based on increased investments in certain growth areas - IT and telecom, financial services and health-care," says Marcus Wallenberg, President and CEO of Investor. The strategy is also supported by MMW and KAW, which are the largest shareholders in Investor AB.

Sonera orders DWDM systems

Ericsson has signed a contract with Sonera for deliveries of DWDM systems to increase the data transmission capacity of Sonera's national telecom network. DWDM, an acronym for Dense Wavelength Division Multiplexing, will enable Sonera to meet growing demands from domestic enterprise and private customers for broadband Internet services. The DWDM system is an extension of the international network ordered last year by Sonera Carrier Networks. Ericsson's DWDM systems provide data transmissions at 10 Gb/s via Sonera's national backbone network, which will increase image transmission speeds between terminals and support other improvements.

Supporting Mobile Services Initiative

Ericsson is participating in The Mobile Services Initiative, an industry-wide initiative to provide an open software standard for Mobile Internet applications. It is launched by the GSM Association, the leading wireless industry body, and is supported by among others Ericsson, Motorola and Nokia.

Jan Wäreby, head of division Consumer Products, says: "We support the initiative to ensure volume use of Mobile Internet in a standardized and non-proprietary way."

Hellström at Asian fair

CommunicAsia, the year's most important telecom event in Asia, was held last week. Kurt Hellström was one of the main speakers at the trade show in Singapore.

Extending from June 19 through June 22, CommunicAsia is aimed primarily at telecom industry professionals.

Ericsson demonstrated its capacity as a supplier of end-to-end solutions, with everything from telephone models to systems.

The company also conducted live demonstrations of WCDMA and GPRS. Ericsson personnel working on the display stand at-

tended an intensive training program.

"Everybody had to be familiar with Ericsson's main theme, know what customers are interested in

and guide them to the right demonstration places," says Lars Bernring, project manager.

Ericsson's CEO Kurt Hellström was one of the keynote speakers at

the telecom conference arranged in conjunction with the trade show.

Lars-Magnus Kihlström
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A3618
- will be
launched
in Asia.

New releases at CommunicAsia

► A number of new products were released at CommunicAsia. The A3618 mobile phone is the first handset developed in cooperation with Taiwanese manufacturer Arima and will be launched in Asia during next quarter.

The phone features a large full graphic display, screen savers and T9

text input for quick SMS messaging and weighs only 86 grams. Ericsson also presented its Chatpen, a tool that uses Bluetooth technology to transfer handwritten text and interact with mobile phones, computers and Internet.

The launch is scheduled for the beginning of next year.

Furthermore, two GPRS modules for the 900/1800 and 950/1900 bands were unveiled. The modules enable machine to machine (M2M) communication and the GPRS technology makes it possible to transfer large amounts of data between any nodes anywhere.

The launch of a WAP gateway with

Multimedia Messaging Services (MMS) was also announced. The gateway also provides complete support for WAP Push, which allows the delivery of information to be initiated by someone else than the user.

Lars-Magnus Kihlström

PPDC deal secured with J-Phone

Ericsson has received an order for its PPDC mobile technology in Japan. The order was placed by J-Phone, an operator that is now upgrading its network to packet data.

PPDC is an acronym for Packet Personal Digital Cellular, which is generally described as the Japanese equivalent of GPRS. NTT DoCoMo,

the largest mobile operator in Japan, has already installed the technology in its popular i-Mode service. J-Sky, the corresponding service offered by J-Phone, will now be upgraded from circuit-switched PDC to packet-based PPDC.

"By upgrading to PPDC, J-Phone will create a better base for the launch of new mobile data services. The improvement will also increase

J-Phone's competitiveness and extend the life cycles of its PDC networks," says Mats Köhlmark, Executive Vice President of Ericsson in Japan.

As a result of the order, Ericsson has become the Japanese company's primary infrastructure supplier. In addition to installation of the PPDC network, which will be placed in commercial operation during the

second half of this year, Ericsson will deliver new packet-based switches.

Ericsson has worked in cooperation with J-Phone for nearly 10 years, dating back to 1992. The Japanese operator has slightly more than 10 million subscribers. Its customer base corresponds to a market share of about 16 percent, which ranks J-Phone in third place among Japanese mobile operators.

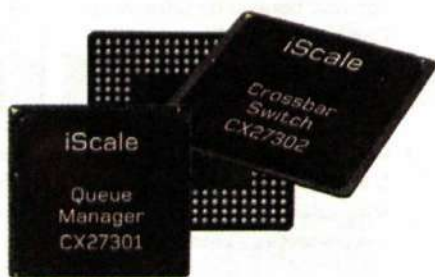
"I hope this contract will enable J-Phone to attract more subscribers and increase its revenues," says Mats Köhlmark.

Ericsson has also been contracted to deliver WCDMA networks to J-Phone, in addition to radio networks for WCDMA to NTT DoCoMo.

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MINDSPEED TECHNOLOGIES BUILD IT FIRST

Equipment worth millions to be sold off

When Flextronics assumed control of mobile phone manufacturing, large amounts of Ericsson's equipment and inventory were left over. With an estimated value of at least USD 900 million, intensive efforts are now under way to sell it off.

The equipment in question is very modern, and is designed for manufacturing GSM phones. Most of it is only about two years old and in very good condition, according to Herman Kattelbeld of division Consumer Products. He is now busy visiting various Ericsson facilities around the world to gather up leftover equipment. His travels include destinations such as Linköping and Kumla in Sweden, Carlton in the UK, Shah Alam in Malaysia, Lynchburg in the US and São Jose Dos Campos in Brazil. Herman Kattelbeld is now encouraging managers of plants throughout the company to look a year into the future and consider whether they might have a use for some of the equipment.

"If we get rid of everything now and then realize that we need to purchase new equipment from an outside source within a year, then we'll really have lost money. I hope that the various units will think carefully about that," says Herman Kattelbeld.



Herman Kattelbeld



The plant in Linköping is one of those were manufacturing equipment and inventory was left over. Photo: Ecke Küller

It is possible that what Ericsson is unable to sell might be of interest to Flextronics. A third alternative is to sell the equipment on the open market. The downturn in the mobile phone market, however, has meant that there is less demand for the equipment.

Of course the best option for Ericsson would be to retain as much of the equipment as possible within the company. That would yield the greatest value for Ericsson. It is uncertain at this time exactly how much the equipment is worth, but estimates points to at least USD 900 million.

Elin Dunås

Two divisions unite in Multi-Service Networks

Ericsson's division Multi-Service Networks and division Data Backbone and Optical Networks will integrate to become a single unit known as division Multi-Service Networks.

The move – effective July 1 – is part of the company's strategy to become more streamlined and focused.

Einar Lindquist will be head of the combined division, based in Stockholm, while Mike Thurk will continue to run the Data Backbone and Optical Networks operations

until integration of the two divisions is finalized, expected by the end of September. The integration process will be supported by Björn Olsson, presently at division Mobile Systems.

After successful integration, Mike Thurk will assume a position within Corporate Marketing and Strategic Business Development.

Technology roadmap

"The integration of the two divisions will enable us to offer a complete technology roadmap and end-to-end solutions for multi-service networks, packet back-

bone and optical networks, as all operators choose one IP/ATM based broadband multi-service network," says Torbjörn Nilsson, Senior Vice President, Marketing and Strategic Business Development.

New revenue streams

Einar Lindquist, head of division Multi-Service Networks, adds:

"Our world-class Engine is today powering the circuit to packet migration of operators around the world, enabling our customers to remain competitive, offer new services, gain market shares and

generate new revenue streams. The new division will also support division Mobile Systems with core network technology."

Torbjörn Nilsson concludes:

"All decisions will be taken with a strong focus to improve our business proposition for present and future customers, to achieve further organizational efficiencies and to strengthen our competitive position in the marketplace."

More details will be released once the integration has started.

Kris Walmsley

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HELLO THERE...



Joann Chang

...Senior Director Human Resources at Ericsson in Taiwan, where the company is collaborating with the university in Taipei to provide 3G training. At the same time, major internal efforts are being made to further train personnel.

Why is Ericsson collaborating with the university?

"Taiwan lacks people with the appropriate telecom and computer knowledge for 3G. It takes at least a year for new recruits to acquire knowledge and this entails substantial costs, since it involves training abroad. The university in Taipei, which is one of the best in Taiwan, is extremely interested and has collaborated with us to put together a four-month course."

How many participate in the training program?

"We received 800 applications and selected 22 students, who were employed by Ericsson in December 2000 and are now starting work here after completing the course. They all have in common the desire to work in telecom and the right approach to learning."

In 2000, you made a substantial effort to implement Ericsson's Competence Shift training course and were named the best company – "best in class" – in the Asia region. How did you succeed in motivating the personnel?

"A year and a half ago, we appointed a committee for the Competence Shift focusing on datacom competence, in which all participants had a computer background and represented various functions here at the company. In this way, we were able to create a strong commitment. At the HR unit, we had the combined task of coordinating and motivating. We also took care to follow up results. This year, Mobile Internet is in focus for training activities and the committee still exists, but with different members. Considerable interest in training has been shown among the employees. We have installed an e-learning center in our building. It is open 24 hours a day every day, so employees can use it when it suits them."

How long have you worked for Ericsson?

"I started four years ago. Working here is fun and challenging because you have the possibility to take initiatives and try new solutions."

Gunilla Tamm

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Union on the Nordic market

A new market unit for the Nordic countries has been introduced in Europe. Combining resources over the geographical boundaries, the new unit will increase competitiveness on the Nordic market.

The new market unit includes Denmark, Finland, Iceland, Norway and Sweden, and will come into operation from August 15. The unit

will be responsible for Ericsson market related activities in these countries.

Each country will specialise in specific, complementary skills, which will be utilised across the geographical boundaries.

"Forming a Nordic organization and a Nordic Market Unit is a natural step, and it is very exciting to participate in this process. This means that we can increase our

focus on the customers, a majority of which already have an international strategy," says Steinar Tveit, newly appointed head of the Nordic Market Unit.

Steinar Tveit has been President of Ericsson Sweden since 1999, and will continue in this role alongside his new role as head of the Nordic Market Unit.

The Presidents of the countries included in the new market unit

will also continue in their present positions.

"Our aim is to – together with our customers – ensure that the Nordic region keeps a leading position within 3G and Mobile Internet. And, of course, we will also increase our operational efficiency," says Steinar Tveit.

Tonya Lilburn

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Mobile Outlook from Ericsson Microsoft

Mobile access to e-mail and Outlook is now being marketed in Hong Kong and New Zealand by Ericsson Microsoft Mobile Venture. In both places, this involves collaboration with local operators.

In Hong Kong, the leading mobile operator CSL has reached an agreement with Ericsson for a solution that provides secure mobile access to the Internet and, for companies, to their intranets.

The application has been developed by Ericsson Microsoft Mobile Venture, which was created to rapidly produce secure, user-

adapted services for the new mobile Internet. The solution for Mobile Outlook is packaged as a complete service that operators can quickly offer to their end customers. This integrates safe and efficient handling with payment systems and support for most terminals.

Launched later this year

The mobile e-mail system will be launched later this year for companies in Hong Kong and, in the future, collaboration will focus on the development of new mobile applications for GSM, GPRS and 3G.

"Mobile e-mail is a key service and Hong Kong is an advanced market, with Hong Kong CSL being one of the most innovative operators," says Ulf Avrin, President of Mobile Venture.



Ulf Avrin

In New Zealand, the local companies belonging to Ericsson and the global operator Vodafone, are collaborating on the marketing of mobile Outlook and Internet and intranet access.

An agreement has already been signed with one corporate client, the electricity company Genesis Power.

The new application, which is called Vodafone Moso and was developed by Mobile Venture, will provide users of WAP telephones, for example Ericsson's R380 or R320, with access to Microsoft Outlook with services such as e-mail, calendars and "to do" lists.

Lars Cederquist

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www.mobileventure.com

EDS takes over local IT operations

The IT company EDS is to take over responsibility for local IT operations and help desk functions in Western Europe. The agreement comprises all countries in the Western Europe market area, except Sweden.

The reason that Sweden is not affected by the agreement is that IT support in that country has already been outsourced to Compaq for the past year. Under the agreement, employees who are currently working with end-user support and local IT infrastructure will be transferred to EDS. On the other

hand, Ericsson's strategic and global infrastructure will remain within the company. All hardware will continue to be owned by Ericsson.

Savings implemented

The outsourcing of support operations to EDS is a continuation of the Harvest program that was begun in 1999 and was aimed at outsourcing all IT support within Ericsson. At that time, a minimum level of activity was established for the sections of IT operations that were to be sold.

The fact that the company is now proceeding even further is the re-

sult of the savings measures being implemented by Ericsson's IT department in conjunction with the efficiency program. The purpose is to raise quality and reduce costs.

"This will generate improvements. Transferring IT support to a company that is a specialist in its field means that the service level will be increased. At the same time, we at Ericsson can focus more on the activities we are good at," says Thomas Atterstam, information manager at Ericsson Corporate IT.

However, he points out that the Business Support Center, the "shared service" organization that already

exists in Western Europe, will continue to be the coordinating interface for the services offered by EDS.

130,000 employees

About 460 employees will be transferred to EDS. The transfer has already begun and will proceed during this year and next year.

EDS has approximately 130,000 employees in 55 countries. The company's international customers include Citibank, General Motors and Xerox.

Tonya Lilburn

Nokia issues profit warning

» The slowdown in the telecom market has now also affected Nokia. The world's largest mobile telephone company was forced to lower expectations for the year's second quarter. Growth is now projected at 10 percent, down from the previous forecast of 20 percent. Earnings per share are expected to amount to EUR 0.15–0.17, compared with the earlier forecast of EUR 0.21.

In the past, Nokia was believed to be unaffected by the telecom industry decline, and the market reacted strongly to the Finnish company's unexpected earnings warning. Nokia shares fell by 19 percent, triggering a decline in telecom shares on stock exchanges around the world.

Some telecom shares recovered after the announcement, however. Ericsson's shares were down by six percent.

"We believe the decline is a result of the general slowdown in the market, which is driven by economic uncertainties, the ongoing technology shift and less aggressive marketing by telecom operators," commented Nokia's CEO Jorma Olilla.

Some American technology companies have already issued warnings of lower earnings. Juniper Networks, for example, lowered expectations for the second quarter by one-third. According to analysts interviewed by The Financial Times, Nokia's earnings warning might be the first sign that a similar downward trend has now reached Europe.

DoCoMo's 3G-test problematic

» The 3G-network launched on May 30 by NTT DoCoMo of Japan has encountered technical problems. E-mail sent from PCs could not be received for 18 hours, according to the news agency AP. In addition, the special video telephones promised by DoCoMo have been delayed.

The telephones are considered to be 3G's main attraction for many people. By the end of June, however, the Japanese operator has promised that 1,200 video telephones will be available.

The 3G-tests that have been started are limited to Tokyo and certain sections of neighboring Yokohama and Kawasaki. More than 147,000 people volunteered to serve as test pilots during the summer, and about 4,500 were selected.

Verizon changing wireless standard

» Verizon Wireless, the largest mobile operator in the US, is considering a change to the WCDMA network standard. The conversion is under consideration despite the fact that Verizon now uses CDMA, which would logically be followed by CDMA2000, while WCDMA is a successor of GSM.

Verizon has more than 27 million subscribers, and the company has invested approximately USD 450 million to build a CDMA network supplied by Qualcomm, according to ZDNet News.

If Verizon implements its plan and switches to WCDMA, the conversion would send an important signal that WCDMA is the real winner, according to one analyst interviewed by the news agency.

Ericsson has owned Qualcomm's infrastructure division since 1999.

Crowded conditions on

The US is the world's largest market for mobile telephony. American airwaves are overcrowded, however, which is creating difficulties for the mobile telecom industry. There is a growing awareness among government authorities that radical changes are needed.

The US is the global leader in virtually all sectors of high-technology, and the Americans should also lead in the mobile telephony sector. Several factors are working against mobile telephony in the American market, however. Licenses in the US are distributed on the regional level, and there are large a number of more or less compatible system solutions for mobile telephony. There is also a shortage of frequency space.

GSM, which is used globally by two-thirds of all mobile telephone

FACTS/MOBILE STANDARDS

AMPS: The Advanced Mobile Phone System is an analog mobile system used by approximately 35 million subscribers in the US.

TDMA: Time Division Multiple Access is a digitized version of AMPS. The technology is used by about 25 million subscribers in the US.

CDMA: Code Division Multiple Access is an American systems solution used mainly in the US and Korea. Compatible for upgrading to the 3G technology referred to as CDMA2000.

subscribers, is now also starting to gain greater momentum in the US. As the result of a decision in 1993, GSM was placed on a different frequency band, compared with the Asia and Europe/Africa regions – 1900 megahertz instead of 1800 megahertz. The US, accordingly, went directly against recommendations issued by the International Telecommunication Union (ITU).

In the preceding year, all other countries unanimously agreed that tomorrow's 3G would be served by the 1900-band.

Although the decision was not in line with ITU's goal to establish a single standard for mobile telephony, it was not surprising from the American perspective. US authorities have elected not to distribute frequencies based on the techno-

logy they use, according to Tom Lindström, who is responsible for spectrum issues at Ericsson in Washington, DC. For this reason, the 3G concept does not have a uniform definition in the US, compared with Europe and Japan, he says. Instead, a broader concept is used in the US – "Advanced wireless communications." In Japan and Europe, conversely, government authorities have declared that a specific spectrum must be used for a specific technology generation.

Controlled by market

"A new spectrum has been allocated in Europe for UMTS (3G), while GSM remains on its ordinary frequency. Operators in the US can make the transition from 2G to 2.5G and proceed to 3G in the same spectrum. The market is completely free to choose which technology it wants use," says Tom Lindström.

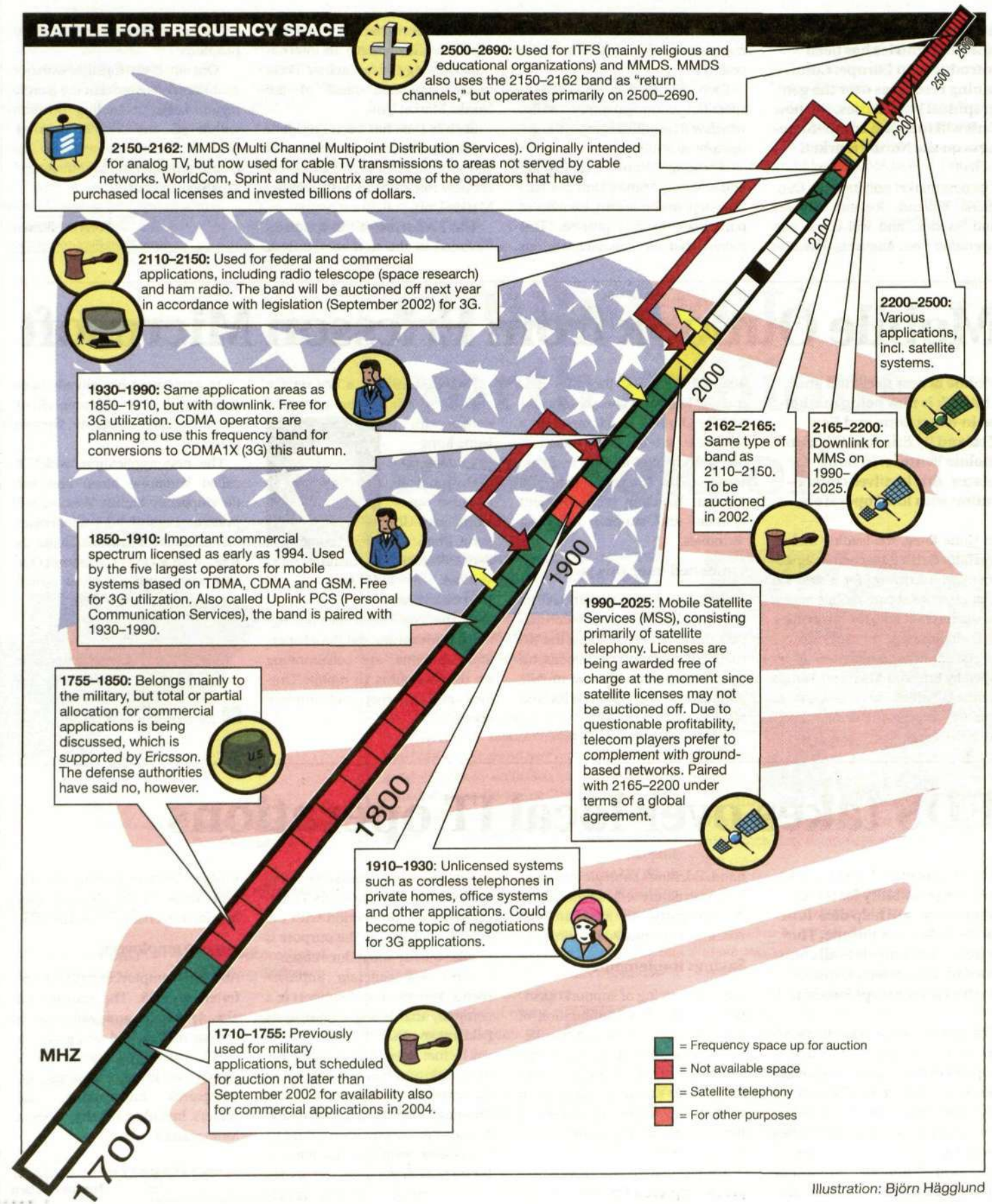


Illustration: Björn Hägglund

American airwaves

This has undoubtedly contributed to the current situation whereby several different system solutions for mobile telephony compete with each other for the favor of end-users, from analog AMPS to second-generation networks such as TDMA, CDMA and GSM.

Military frequencies

The general shortage of space in American airwaves is also due to important frequencies that are occupied by the US intelligence and defense departments. The country's military authorities, which wield comprehensive influence in this area, have a very large number of proprietary systems for a broad range of supreme command applications.

Through the years, the US has also started to use a large number of wireless technologies. Furthermore, the American market is divided into hundreds of local and regional license markets that create a virtually impenetrable patchwork quilt of frequency space.

"American operators have alleviated the problem by exchanging frequencies and licenses with each other to create national coverage," explains Tom Lindström.

Radical changes

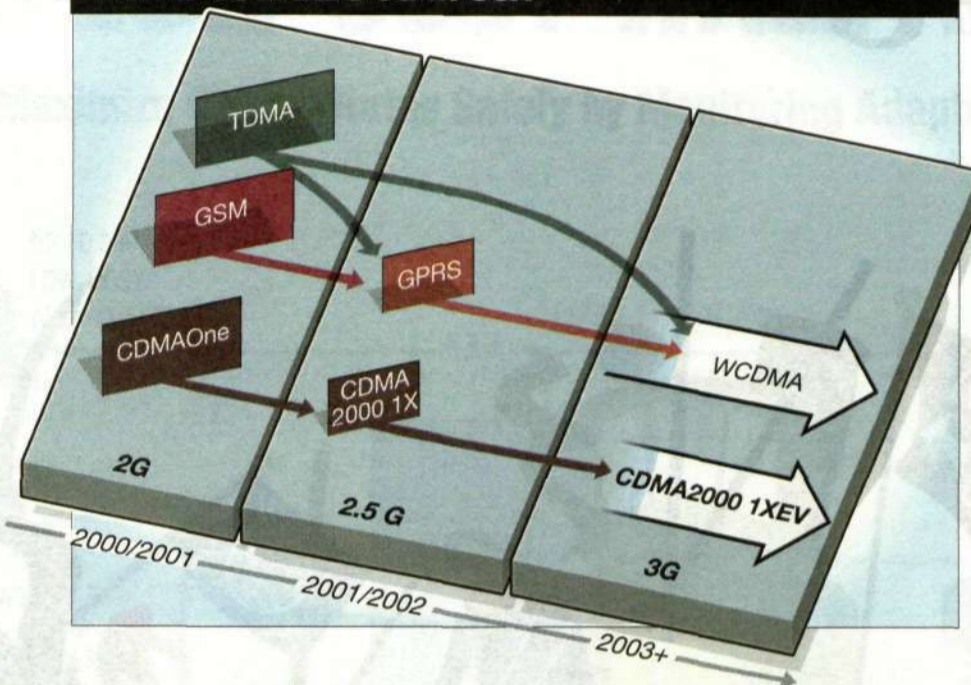
Concerns that the US will fall further behind when the new generation of mobile networks is introduced will force the country to implement radical changes. A report by the economic advisory council of the White House, which landed on former President Clinton's desk, emphasized the importance of establishing some semblance of order in the distribution of frequency bands for commercial utilization in mobile telephony.

"Bill Clinton, therefore, recommended last autumn that the FCC speed up the process in preparation for the license auctions that, as mandated by law, must be held no later than September 2002," says Tom Lindström.



Tom Lindström

TREND TOWARDS 3G IN USA



The 3G concept in the US does not have the uniform definition that exists in Europe and Japan. Operators in the US can make the transition from 2G to 2.5G and proceed to 3G in the same spectrum. The market is completely free to select to use whatever technology it chooses to implement.

Illustration: Björn Hägglund

FACTS/AUTHORITIES AND ORGANIZATIONS

FCC: The Federal Communications Commission is the government authority responsible for commercial utilization of frequency bands in the US.

NTIA: The National Telecommunications & Information Administration is the government body that manages the country's federal frequency bands. NTIA is a subordinate department of the US Department of Commerce.

Department of Defense: The American military is the largest user of frequencies and has considerable influence over federal applications.

CTIA: The Cellular Telecommunications & Internet Association represents the interests of the mobile telecom industry.

CTIA maintains contacts with the FCC and politicians in Congress to protect the interests of its members.

ITU: The International Telecommunication Union defines standards for the global telecom industry and regulates frequency spectrums for different technologies, including which frequencies will be used for third-generation mobile networks.

The regulatory body, however, has access to only a few frequency bands, and the release of allocated bands would require substantial amounts of both time and money. Costs incurred to transfer military systems to other frequencies could amount to as much as USD 10 billion, with time requirements that might extend through year 2017.

After the recommendation issued by President Clinton last autumn, the FCC has compiled a foundation comprising different proposals for spectrum solutions

that were distributed for consideration by appropriate authorities during the spring. An extremely delicate and high-stakes procedure is now taking place in the corridors of Washington, where telecom industry players are trying to influence FCC and NTIA authorities.

"One proposal complies with the primary proposal submitted by Ericsson and Nokia. Others call for access to a large number of the military frequencies, which is creating risks of further delay in access to new frequencies for

commercial networks. The final outcome is extremely uncertain and difficult to predict," says Tom Lindström.

Despite the complications, the US is the world's largest market for mobile telephony, as evidenced by the country's 117 million subscribers. With a market penetration level of slightly more than 40 percent, the US also offers significant potential in the new mobile world.

Mats Lundström

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TV-stations block frequency bands

According to present plans, the 700-MHz frequency will be auctioned off in the US on September 12. But will there be an auction? Government authorities have wanted to auction off the frequency for a long time, but risks are now emerging that might cause a further delay in the auction process.

The 700-MHz band is an example of how complicated it can be to free up frequency space in the US. The telecom industry has expressed interest in the band, since the frequency range offers good coverage.

Today, however, it is used by about 100 small TV-stations that do not want to switch their frequencies and are opposing the auction. The next scheduled date for the auction is Septem-

ber 12, but many observers believe it will be postponed again. The problem is that companies that are awarded licenses in the auction will not be allowed to use the frequency band immediately.

Years before band is available

In fact, the TV-stations will be able to retain their frequency band until 2006, when it is assumed they will convert to digital transmissions on another frequency. But it might take even longer before the frequency band is available.

The stations are not obliged to give up the space before 85 percent of their users have access to digital TV-reception. It took 22 years for color TV to reach a penetration level of 85 percent.

"The concept of selling frequencies that are already taken is unreasonable," said Dennis Strigl, President of Verizon Wireless, in an article published in *The Economist* last year.

According to Tom Lindström at Ericsson, it remains highly uncertain how utilization of the 700-megahertz band for mobile telephony will finally unfold.

Still not commercially feasible

"There are no systems in operation today that use these frequencies, and it will probably require a player willing to buy the frequency space for the entire US before commercial operations may be considered feasible," he concludes.

Mats Lundström

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Sharing the same net

Mobile operators seem to have found a solution to the problem of high initial costs for 3G. By sharing networks, their costs can be reduced, while allowing 3G services to be launched more quickly. Industry analysts see mostly benefits in the trend towards shared networks.

The trend toward sharing UMTS networks among operators began in Sweden. It all started in the end of last year, when network operator Telia joined forces with its competitor Tele2. Together they created UMTS Nät AB. Subsequently, the other 3G license holders in Sweden, Hi3G, Europolitan and recently Orange, also teamed up to build a shared network.

However, it was only after June 5, when the German regulatory body, RegTP, clarified its regulations in favor of shared 3G networks, that the issue heated up within the industry. Just days later, German operator Deutsche Telekom and British BT announced that they would share a network. The two operators expect to reduce costs for building the network by up to 30 percent and to realize significant savings on operating costs.

Since there are no common rules for all EU member states, decisions by the authorities in each country will be crucial. After the German clarification, however, regulatory authorities in other European countries are expected to be increasingly favorable toward shared UMTS networks.

The EU's IT Commissioner Erkki Liikanen regards shared networks as an attractive solution to the high initial costs for 3G. He would also like to see a common regulatory framework for frequency allocations across Europe.

Cooperation necessary

In the battle for subscribers, coverage is a variable that is reduced when operators share a network. Instead, they will compete for subscribers solely on the basis of a winning combination of services. The majority of analysts around the world view network sharing positively.

In an interview with Computer Sweden, Tommy Ljunggren, mobile consultant at consultancy firm Northstream encourages other authorities to grant approval.

"Similar decisions are needed in more countries to avoid driving operators out of business," says Ljunggren, adding that network cooperation between operators creates the market prerequisites on which planning was based when the licenses were issued. If the authorities do not take action, there is a risk that operators may be eliminated from the market in several countries.

"The authorities would then not achieve the goals that were set for increased competition and a 3G



High license fees for 3G put mobile operators under pressure. Sharing networks allows them to reduce costs. Recently, the German regulatory authority RegTP granted approval for shared networks, and shortly thereafter, Deutsche Telekom and BT announced a partnership.

Illustration: Kerold Klang

market with many players," notes Ljunggren.

A report from consulting company Cap Gemini Ernst & Young concludes that UMTS is not sustainable over the long term without network cooperation. The only way for operators to create a viable cost structure is to share the network. In addition, the report notes that the advantages are greater for small and newly started operators and that certain large and established players are protesting the authorities' decision.

USA may follow

Analysts Michelle de Lussanet, Matthew M Nordan and Carsten Schmidt at Forrester are less optimistic. They distinguish between what they call broad and focused partnerships. Focused partnerships mean that operators without 2G networks lease capacity in such a network, while they build out their 3G networks. It can also be collaboration in building and operating 3G networks in large and sparsely populated areas. According to Forrester, focused partnerships are tactical and create significant benefits in

that they accomplish well-defined objectives. Forrester believes that one disadvantage of broad partnerships is that they create an unnatural dependency between competitors. According to an article in the American Internet publication, News.com, US operators may soon follow the European example. However, the prerequisites are not exactly the same, and a number of factors work against shared networks in the US. Operators are not as pressured by high license costs, and cellular standards are more varied.

Shared networks are not a phenomenon unique to UMTS. Lambert Beekhuis, system marketing manager at Ericsson's, division Mobile Systems, explains that US operators whose networks often only cover portions of the country have long deployed shared networks by offering national roaming. There are other examples of shared 2G networks in such countries as the Netherlands, Germany and Singapore.

Positive for suppliers

Lambert Beekhuis believes that this development is favorable for Eric-

son. Although it is tempting to believe that shared networks mean lost sales opportunities for Ericsson, this is not true over the long term.

"Lower costs for operators were the incentive for this trend, but that is only one effect. Shared networks will mean larger and better coverage for consumers and this will reduce Time to Market for 3G and create acceptance by consumers. When

consumers start to use 3G services, operators will earn money and need more capacity. This will be good for Ericsson," says Lambert Beekhuis.

A more rapid start for the 3G market also means that applications and terminals will reach the market faster.

Jesper Mott

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FACTS/ERICSSON'S THREE SOLUTIONS TO SHARE 3G NETWORKS

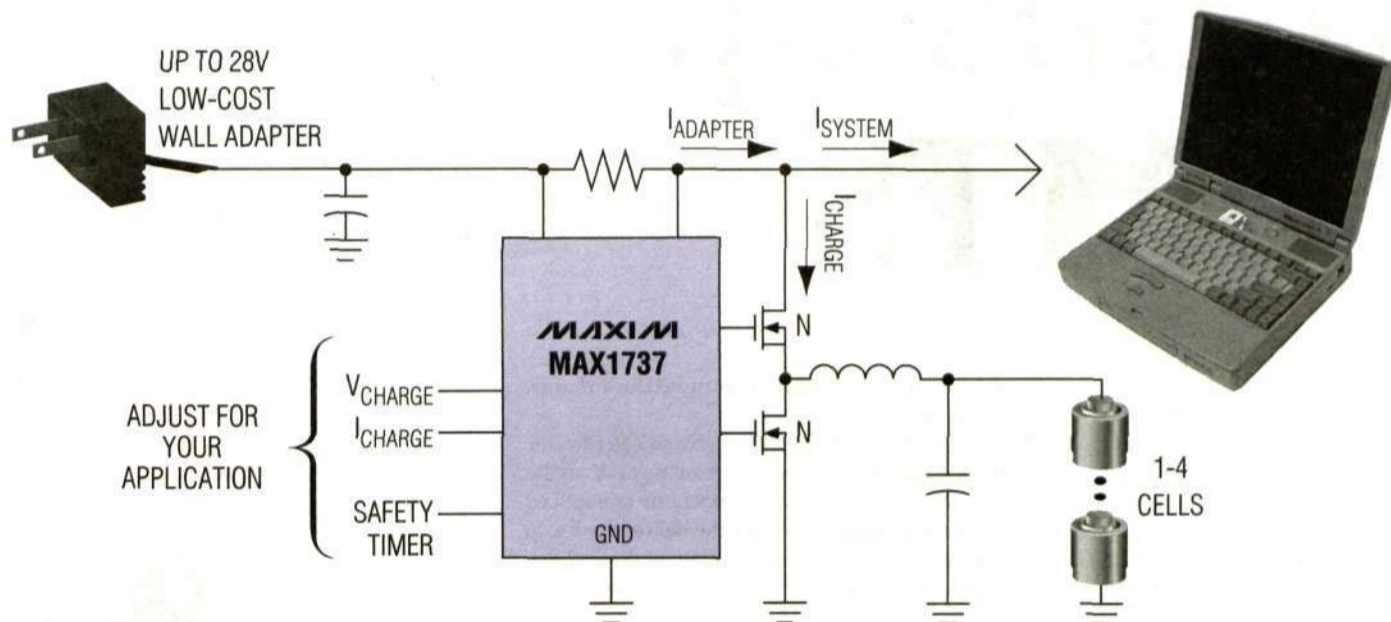
Common Shared Network. This solution allows the operators to fully share the access network deploying only one single carrier. Part of the Core Network is shared as well, however billing, subscriber databases, interconnection and services are handled separately by each operator to allow service differentiation.

Geographical Split Network. Each operator has a network providing coverage in certain areas. Subscribers are allowed to roam between networks, thus obtaining greater coverage.

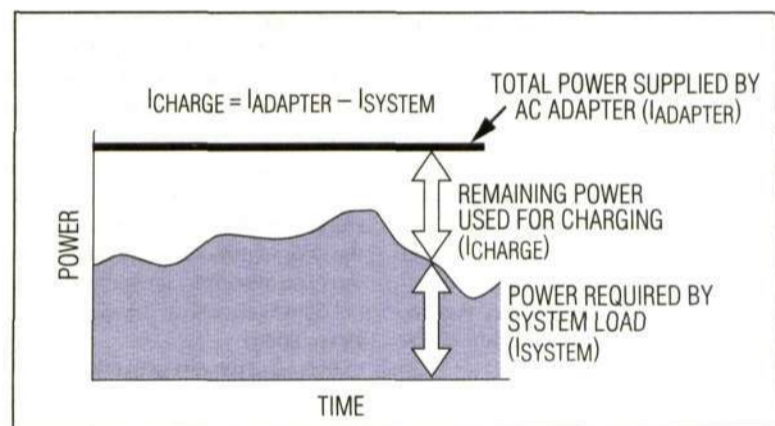
Shared Utran. The operators share the physical radio access network but have individual frequencies and functional control of their part. Each operator also handles its individual core network, including services.

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Is it possible to book UMTS orders without having supplied the GSM systems? Absolutely! And Ericsson in Austria is providing the proof. After years of determined efforts, Ericsson agreed on two deliveries earlier this year, right under the nose of competitors that have operated in the country since the early 1990s.

Thumbs up for UMTS

Austria has been a blank space on Ericsson's GSM map of Europe for many years. For a variety of different reasons, the company did not win a single contract in Austria during the 1990s, despite there being four different operators in the country and a GSM-penetration level of 70 percent.

It was particularly gratifying, therefore, when two UMTS agreements were signed within a matter of weeks in March. The orders were booked by Mobilkom, Austria's largest operator, and One, the country's third largest operator.

It's been a long, hard road filled with setbacks, however. When Mobilkom became the first Austrian operator to build a GSM network in 1991, Ericsson was still in the throes of establishing operations in Austria, and the company fell behind its competitors. At intervals of a few years each, the other three operators started operations during the period up to 1998. Again, Ericsson came up empty in its attempts to provide equipment for the mobile market.

"We always finished as a 'glorious second,' and it was extremely frustrating. Especially since we knew we had submitted the best offer. In the end, we decided to replace people in the sales team. It was the only way we could generate the energy to try again," says Otto Zischka, Key Account Manager for One.

Brighter 2000

But in 2000, prospects started to become a little brighter. After a short and comparatively inexpensive auction, six operators, or every operator in the bid process, were awarded 3G-licenses. The licenses were granted to the four established GSM-operators in Austria and two new players.

In this instance, Ericsson was at a disadvantage due to its lack of past business relations with the operators. They weren't familiar with Ericsson's technology and didn't know how Ericsson would function as a business partner.

"In the case of Mobilkom, the company opened the door to Ericsson by booking some minor orders. Under conditions such as these, it is important to establish a bond of confidence and trust between the customer and Ericsson. Among the orders were MINI-LINK and test equipment for GSM systems. Also important was the fact that Ericsson became supplier of the GSM radio equipment to Mobilkom's subsidiary in Croatia," says Kurt Oberndorfer, Global Account Manager for Mobilkom.

The other operator had other priorities.

"For an operator like One, being number 3 with expansion ambitions, it is critical for the company to know it will receive the support it needs both before and after rollout," says Otto Zischka.

The definitive turning point occurred last autumn when Kurt Hellström, Ericsson's President and CEO, and Mats Dahlin, Vice President of division Mobile Systems, visited the operators.

"When these two executives came, our customers understood that Ericsson was serious in its business approach. During the preceding year, I had not been able to book a single order from One, but shortly after the visit I received an order for ten MINI-LINK units. I understood later that it was a test to see if we could deliver what we promised."

One's purchase process was completed in record time. To create an agreement that offered the best terms and conditions, One was anxious to be first to get started.

"We received the request to submit an offer on December 15. The offer had to be tendered no later than January 22 and five weeks later, on February 28 the company said it would announce its decision. We worked

around the clock, sometimes uninterrupted for 40 hours, to complete the offer."

One also worked to a tough timetable to complete its preparations before the stipulated deadline and, on the last day of February, the Austrian operator announced that Ericsson had been chosen for the delivery order, in combination with Nokia. Only a couple of weeks later, Mobilkom also announced that it too had chosen Ericsson, with Nortel as the second supplier.

Spirits soared, quite naturally, and not only in Austria. The blank space on Ericsson's map of Europe was finally filled. But a great deal of hard work remains for Otto Zischka and Kurt Oberndorfer. In fact, the agreements were only the beginning. The important task at hand is to build an organization with the skills and expertise needed to complete the job.

Some new areas of expertise have to be developed, since the company's operations have not previously included mobile infrastructure. It's a matter of developing the skills of present personnel in time, bringing in expertise from other Ericsson units and recruiting new personnel. This is all well on the way to fulfilling the customers' expectations.

Rollout of the test network is scheduled to begin in the fall. Initially, Ericsson and Nortel will each develop a complete network for Mobilkom. With regard to the One contract, Ericsson will deliver the UMTS radio access network (Utran). But test operations in the fall will be critical for both contracts.

"Mobilkom has high quality expectations and therefore competition between the suppliers continues. If we are unable to meet our commitments during the tests, we might find ourselves out in the cold once again," says Kurt Oberndorfer.

And, quite naturally, everybody is working extremely hard to eliminate that possibility after the company has come this far.

"My advice to all sales teams is that you must be consistent in what you are doing, and persistent, even if you have to wait two years before you finally succeed. If you expect to achieve success in a matter of three months, you may as well look for another job," says Otto Zischka.

Teamwork important

No single person wins a UMTS contract. It is the work of many people actively involved at different levels in different countries.

"A very large number of different elements have to be carefully coordinated to secure a UMTS contract. Most of today's operators are global players with operations in several different countries. It's also important to establish and maintain the right contacts at the right levels," says Nils Torstensson, head of Ericsson's mobile systems operations in Austria.

Kjell Johansson, President of Ericsson in Austria, plays an important role in this with his contacts with the management of telecom operators in other markets. Since Telekom Italia is a major shareholder in Mobilkom, contacts are utilized via Ericsson in Italy. Norwegian operator Telenor and Tele Danmark are part-owners of One and the Key Account Managers for these two operators in the Nordic countries are also involved.

"It's important to coordinate the terms and conditions



of the contracts. We also have business relations with these operators in their respective countries. Prices and other terms have to maintain the same levels."

Support has also been provided by a special organization in Sweden for break-in markets, and the visit by representatives of executive management was extremely important.

As many as 100 persons in the local organization worked on the offers. Among other requirements, Mobilkom requested answers to 5,700 questions ranging from measurements for base stations to applications and support services.

Lars-Magnus Kihlström
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Reaching for the top. Account Managers Otto Zischka (below) and Kurt Oberndorfer have good reason to feel good. After years of determined efforts, their respective sales teams have succeeded in securing two UMTS contracts, Ericsson's first major orders in the Austrian mobile systems sector.

Photo: Ecke Küller

FACTS/UMTS AUSTRIA

Mobilkom is the largest GSM-operator in Austria, with a market share of 45 percent. The company's principal owners are the former PTT Telekom Austria, and Telekom Italia. Mobilkom plans to invest USD 630 million in UMTS during the period leading up to 2010. The network will be placed in commercial operation by the end of June 2002.

One is the third largest operator in Austria, with a market share of 27 percent. Its principal owner is German VIAG. Norwegian Telenor and Tele Danmark also own shares in the company. One's network will be placed in operation in the middle of next year.

Four other operators have UMTS licenses in Austria. Maxmobil, the Austrian market's second largest GSM-operator, is owned by Deutsche Telekom, which has framework agreements for UMTS deliveries with Siemens, Nokia and Nortel. Telering, a company owned by Western Wireless, is the fourth largest GSM operator. No decision has yet been made regarding the supplier of Telering's UMTS network. Hutchison and Telefónica, two new players in the Austrian market, have not announced their selections of UMTS suppliers.

The licenses were awarded after a short auction process in which all bidders were granted a license. The price for each license was about USD 90 million.



Positive trend in Austria

Austria represents an expanding market unit. With UMTS contracts and increased responsibility for Enterprise operations, the situation is one of having to employ new personnel while at the same time improving efficiency.

Until now, Austria has been a market that has differed from otherwise comparable countries. Because no GSM projects have been carried out there, infrastructure has represented only ten percent of operations compared with 70 percent for Ericsson in its general operations. The larger portion has, instead, involved consumer products and Enterprise (60 and 30 percent, respectively).

"We have been the odd ones out in that sense. But now there is a lot going on in Austria," says Kjell Johansson, who heads Ericsson in Austria.

"As mobile operations are being moved over to the new Sony Ericsson company and Ericsson Austria has secured two UMTS contracts, opera-

tions will have a balance more like that of Ericsson elsewhere," he explains.

In Austria, Siemens is a strong competitor. The company has large-scale operations in Austria with approximately 20,000 employees and also, therefore, has substantial political clout, comparable with the company's status in its home country, Germany.

Over the past few years, however, the telecom market has also changed in Austria. The telecom monopoly has been abolished and the state-owned telephone company has been partly privatized and floated on the stock exchange.

"The new situation, with de-monopolization, privatization and the establishment of new players, provides us with new possibilities. Historical relations are becoming less important and, instead, quality and price will be the decisive factors. On the whole, developments in Austria look very interesting and show tremendous potential," says Kjell Johansson.

Ericsson Austria currently faces a delicate challenge. Ericsson Enterprise is expanding and UMTS commitments demand more personnel and new expertise. The number of employees is

therefore to increase from 450 to approximately 600 during the year. At the same time, other operations are to be reduced and made more efficient.

However, the company does not expect to have to lay off personnel. Instead, it is hoped that the competence of existing personnel can be used by moving employees to the new operations.

At the same time, personnel at Ericsson Austria are used to restructuring programs. Ericsson bought into the local telecom supplier, Schrack, in 1991 and took over completely five years later.

"When I came here in 1999, morale was not at its best. Schrack had once been a large and well-known company and then along came a new owner and sold off large portions of its operations. Ericsson was also unsuccessful in gaining a foothold in the GSM business here. I work a lot to try and get people moving forward. It's a matter of setting targets and, at the same time, getting people to feel that these are attainable, of getting personnel to share our values and to believe that our goals can be achieved," says Kjell Johansson.

Lars-Magnus Kihlström

It's a matter of motivating the personal and getting them to believe that goals are attainable.

Kjell Johansson



EU paves the road for Engine

When the finances of the fixed-network operators improve and they begin to invest, Ericsson will be in a strong position to break into the Austrian market. A contributory factor in this regard is that the EU will be deciding on the European standard for broadband.

The broadband market has yet to gather momentum in Austria. Operators have ceased to invest in this area and it seems as if the country is not entirely ready for the new technology. However, as soon as there is an increasing demand, Ericsson will be in a very favorable position, believes Magnar Ringås, Vice President, Multi-Service Networks at Ericsson Austria.

"Here in Austria, the narrowband market has been characterized by local

solutions and demands, creating problems for us that have proved difficult to resolve," explains Magnar Ringås.

"But the situation is different for broadband, since the EU has decided to impose common standards for broadband solutions in Europe, and this opens up entirely new possibilities."

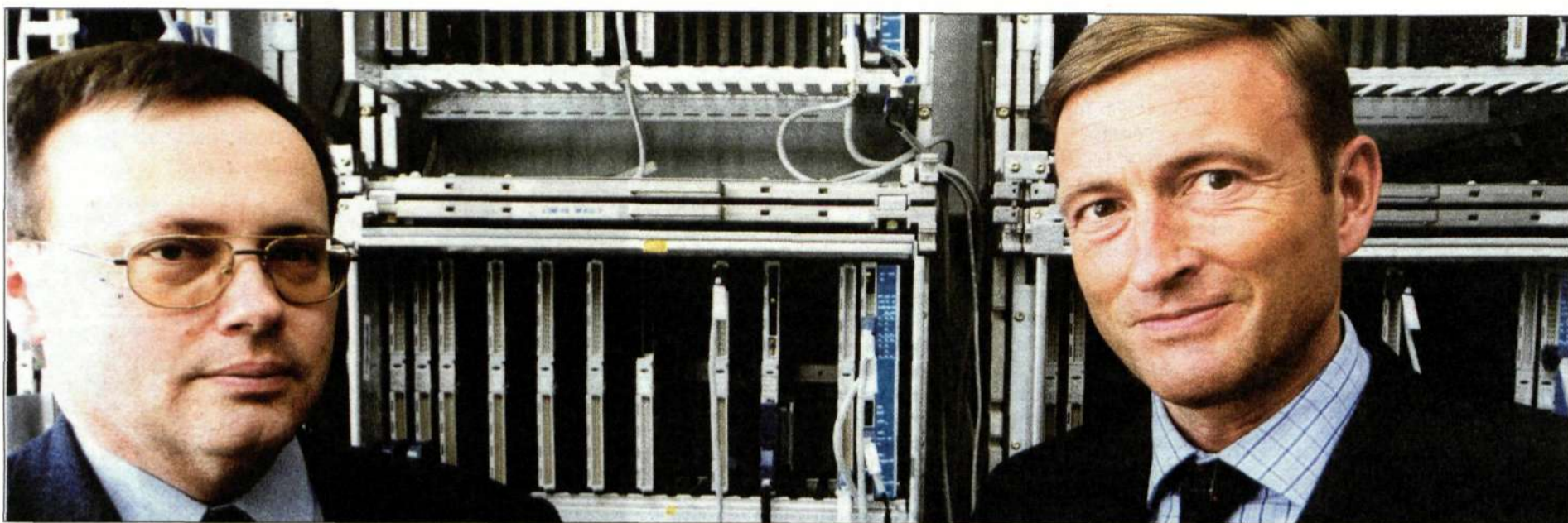
However, Engine is already making inroads in Austria. The first system is scheduled to be placed in operation by the Telefónica-owned operator, European Telecom, at the end of June.

Previously, Ericsson supplied 44 kilometer of fiber for a loop in Vienna, including AXE and transmission equipment, for the same operator.



Magnar Ringås

Lars-Magnus Kihlström



Alexander Grill, head of the Communications Systems product unit at Ericsson Enterprise, and Mats Halvorsen, head of the Central and Eastern Europe, Middle East and Africa market region. Responsibility for development of the MD110 business system has been transferred to Vienna. This is a test facility.

Photo: Ecke Küller

Enterprise expanding in Vienna

Earlier this year, Ericsson Enterprise transferred more of its operations to the office in Vienna, with special focus on development of the MD110 business solution. The office thus has responsibility for products that represent 85 percent of the company's sales volume for this year. In addition, the largest market region, Central and Eastern Europe, Middle East and Africa, also has its headquarters in the Austrian capital.

► Vienna is an important center for Ericsson Enterprise. The city serves as headquarters for the company's most important market region, which accounted for 35 percent of profits in year 2000. One of the company's most important product units, Enterprise Communication Systems, is also situated in Vienna. Since March this year, the unit has had the responsibility for the small enterprise solution, Business Phone, the MD110 system for larger companies, the DECT cordless phone, as well as integration solutions for data applications and telephony.

The products account for 85 percent of Ericsson Enterprise's total sales volume this year and the product unit's workforce is to be expanded from 140 to about 200 employees this year.

The market region comprises 40 markets in Central and Eastern Europe, the Middle East and Africa. The region's largest markets are Italy, Germany and Austria.

"Geographically, Vienna commands a very central location. We are able to reach some of the region's most important markets in about one hour," says Mats Halvorsen, head of Enterprise in the region.

The largest customers in Italy are public and police authorities, and universities. In Germany, companies such as ABB are major customers, and Enterprise has delivered 22,000 lines to government-owned rail authorities in Austria. In countries such as Greece and Morocco, Enterprise is involved in several ongoing projects with banks as the key customers, while a large number of solutions for hotels have been sold in the Middle East.

Enterprise sales are managed by partners, with Enterprise Solutions, majority owned by Apax, serving as the largest and most important. Earlier this year, Enterprise Solutions acquired Ericsson Enterprise's sales organization in 18 countries. Ericsson Enterprise also has several other partners, however. In Germany, the company works with about 15 partners, with most sales focused on Business Phone. Computer Gross, a business partner in Italy, has 2,700 retailers.

The development of Ericsson Enterprise's products will follow two lines. One of them is the growing importance of making products and systems user-friendly.

"Yesterday, the buzzword was Voice over IP. To be able to sell

products, this feature had to be included. Today, VoIP is standard in all business systems, and the new buzzword is plug-and-play. Products have to be easy for the customers to install and operate. This is also important with regard to our new indirect sales model, a structure in which partners also sell products supplied by other manufacturers," says Alexander Grill, manager of the Communications Systems product unit at Ericsson Enterprise.

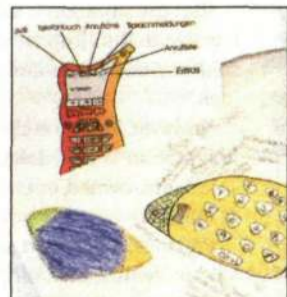
The second line of development is concentrated on integrating voice, data and mobile telephony services.

"In simplified terms, we have to develop solutions enabling a single device to meet a lot of different customer requirements. One example is the solution we call mobile extension. This enables users sitting, for example, in a ski lift to use their mobile telephones in much the same way as the desktop phone in their office. Mobile extension provides services such as automatic call-back functionality if the line is engaged, and calls to the mobile phone can be transferred to an extension at the office."

Demand is also strongly driven by the next generation of business people, being much more interested in using applied technology.

"We have to understand and follow those new trends to be able to supply competitive and attractive products to satisfy our customers and partners in the times to come," says Alexander Grill.

Lars-Magnus Kihlström



Some of the many suggestions for 3G phones received by Birgit Ruby.

Next step a mobile foot?

Such an incredible element of creativity! What about a foot-shaped solar-powered mobile phone, or perhaps you would like to learn a foreign language over the phone? These are proposals Ericsson in Austria has received from young people in a contest conducted under the slogan "Create your own mobile net."

► The desk in the office of project manager Birgit Ruby is overflowing with drawings and models of tomorrow's mobile telephones made of different textile and plastic materials, and which include functions that are described in detailed documents. And these proposals represent only some of the highly creative and extremely exciting entries that have been submitted to the contest run by Ericsson in Austria and the Vienna Museum of Applied Arts and Design for young men and women between the ages of 14 and 26.

"We have received a number of new ideas regarding security and health issues. A telephone that enables users to take their own pulse is one example, while another uses the antenna as a breathalyzer. Some proposals suggest it would be nice if the telephones would transmit certain aromas. And, of course, many proposals are focused on new designs, menu

systems and options to change the face of the telephone, or display," says project manager Birgit Ruby.

The contest serves several functions. It offers a means to encourage future consumers to start thinking about third-generation mobile telephony, how it can be used, what purposes it will serve, and what can be expected.

"All-in-one-phones with entertainment as well as business functions such as an integrated digital camera, mp3-player and PC with touch-screen, are regarded as minimum standard," Birgit Ruby found out.

Many of the proposals have been thoroughly prepared and several of the models and drawings include detailed descriptions of the concepts.

"There are some highly exciting concepts behind the proposals we have received. In this respect, they are more than contest entries and should also be regarded as a type of market survey," says Renate Goldnagl, marketing communications manager.

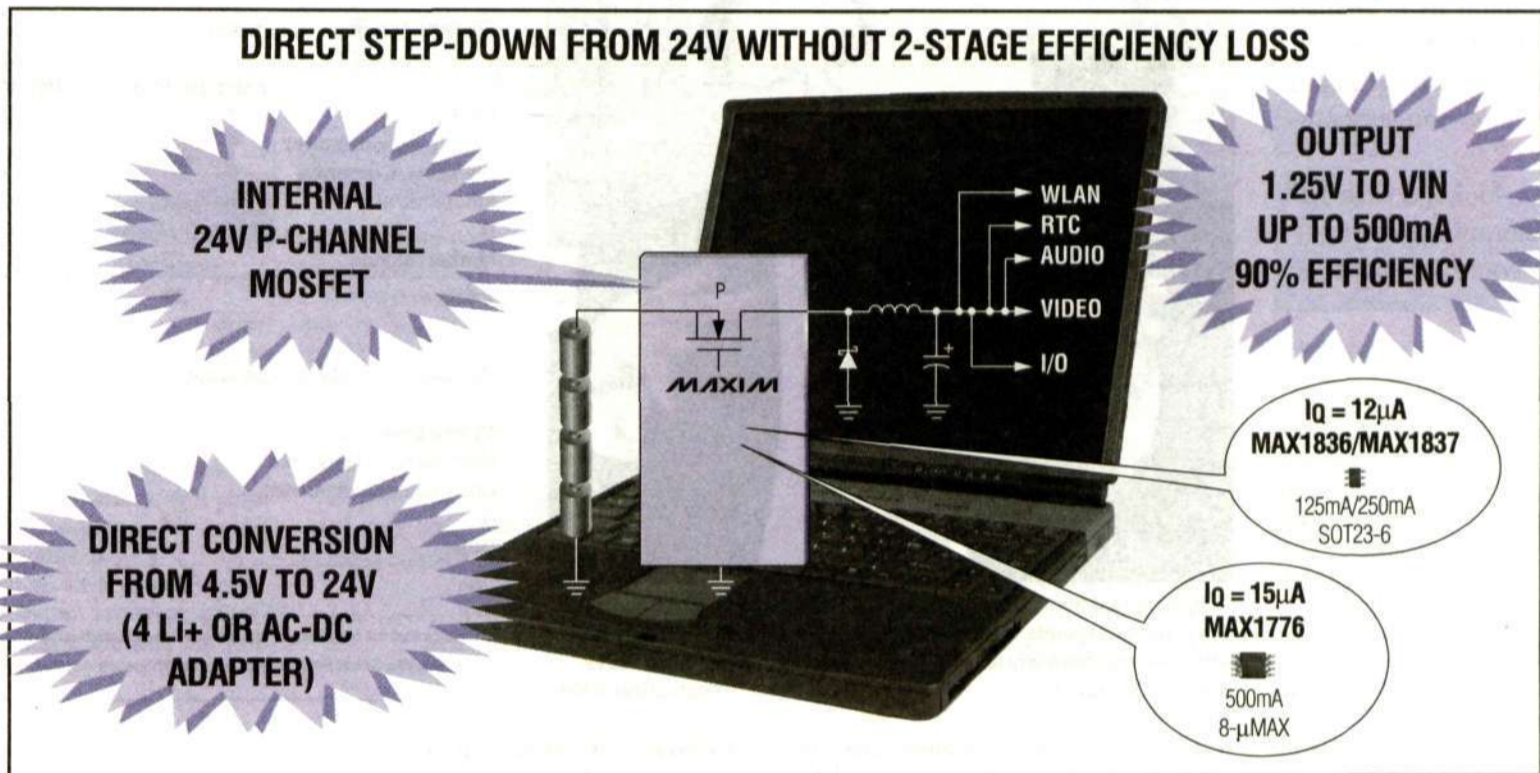
Entries will be judged on criteria such as creativity, innovation, functionality and feasibility, and the winners will be given the "Mobile Vision Award" at a special event on June 27. The prizes include a trip to Sweden, where the winner will present her or his proposal to Ericsson product design personnel. Furthermore, the best mobile visions will be on display in a special exhibition at the Vienna Museum of Applied Arts.

Lars-Magnus Kihlström

SMALLEST STEP-DOWN CONVERTER WITH 24V INTERNAL MOSFET SWITCH

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The MAX1776 delivers up to 500mA, the MAX1836 delivers up to 125mA, and the MAX1837 delivers up to 250mA, permitting optimal inductor selection. The MAX1836/1837 come in a 6-pin SOT23 package, and the MAX1776 comes in a 8-pin μ MAX package. Both convert directly from 24V inputs, eliminating the intermediate step-down voltage that wastes over 15% of the battery life and increases complexity. Applications include I/O, audio, keep alive, WLAN, and video supplies in notebook and handheld systems powered by up to 4 Li+ batteries and AC/DC adapters.



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Efficiency program on right track

It has now been finalized where savings of SEK 20 billion are to be made in the framework of the efficiency program. However, the most important aspect remains – implementation.

“The program looks good so far,” says Ingemar Blomqvist, who is responsible for coordination of the program.

► Three months have passed since Ericsson issued its profit warning on March 12 and the efficiency program was initiated. Many measures have already been implemented, including the issue of redundancy notices to a large number of employees. The manner in which the remainder of the SEK 20 billion total is to be saved has now been finalized.

Ingemar Blomqvist, who is in charge of coordinating the efficiency program, established goals early on for savings in divisions, market regions and business units. In mid-May, reports from the various management teams were submitted, showing the savings measures they could commit themselves to undertake.

Some of them did not attain the goal, others exceeded it, but the total was still SEK 20 billion. The R&D and product units are committed to savings of SEK 7.1 billion, primarily in the form of administrative costs. In addition, research projects are to be better coordinated than they have been to date. Today, research projects can be divided between many development centers, which in many cases is not the most rational solution.

Project and product lines have been examined in detail as part of this process.

“We have looked at the projects’ profitability,



“It is important that there is an awareness within the organization that this is not a corporate management project, but it is the line managers who have responsibility for ensuring that we achieve our goal,” says Ingemar Blomqvist.

Photo: Ecke Küller

ty, growth potential and strategic value. In some cases, the projects have not fulfilled the requirements. These have been terminated or postponed,” says Ingemar Blomqvist.

Reduced costs

On the other hand, there has been care not to damage core operations, mobile systems and multiservice networks.

This compilation also shows that divisional and corporate management functions must make savings of SEK 6.2 billion. IT costs will be reduced by SEK 2.3 billion through the centralization and rationalization of IT operations. To this can be added savings of SEK 4.4 billion in the market regions.

A different constellation of the total shows that it is division Mobile Systems that will carry the heaviest burden. Of the total SEK 20 billion, this division will account for SEK 14 billion, while Multi-Service Networks will make savings of SEK 1.9 billion. These figures also include savings measures for the Data Backbone and Global Services divisions. Ericsson’s corporate management will save SEK 700 million.

Monthly reports

The major task of the near future is to ensure that savings are actually implemented in accordance with the plans. For this reason, effective from this month, developments will be checked, with the management of the market

regions and divisions reporting monthly to Ericsson’s management regarding the measures that have been taken and the results attained.

Ingemar Blomqvist does have responsibility for the coordination of the efficiency program, but he emphasizes that the responsibility for its implementation lies with individual managers.

“It is important that there is an awareness within the organization that this is not a corporate management project, but it is the line managers who have responsibility for ensuring that we achieve our goal,” says Ingemar Blomqvist.

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FACTS/SAVINGS

Efficiency program by function

	Established goal	Reported measure ¹⁾
R&D, products (Mainly administrative)	7.0	7.1
Divisions, Corporate functions, etc.	6.6	6.2
IT	1.7	2.3
Market regions	4.7	4.4
Total:	20	20

Reduction in costs by organizational unit

Mobile Systems	14 ²⁾
Multi-Service Networks	1.9 ²⁾
Corporate management	0.7
IT	2.3
Other	1.1
Total:	20

¹⁾ Savings that the organization has identified and established, in SEK billion.

²⁾ The divisions Global Services and Data Backbone are included in these amounts.

A traditional market with new direction



► Ragnar Bäck, Executive Vice President of Western Europe, says the continent as a market area differs from the others in its customer base.

“We have a long tradition in Europe and many long-standing customer relationships,” he says.

“Europe is, of course, very important to Ericsson. At present, it is hit by the telecom slowdown and we have efficiency measures going on everywhere.”

However, Ragnar Bäck and his team didn’t wait for the corporate Efficiency Program before deciding to reduce costs.

“We actually saw volumes going down – or in some areas, they were flat – earlier this year and started with our own program,” he explains. “The first items we looked at were travel, conferences and other expenses.”

More fundamental savings will come in operating expenses and human resources.

“As a first step, we’ve terminated some contracts

and have let consultants go. Altogether, this will affect some 2,000 people in Western Europe.”

In addition, contracts with suppliers are being re-negotiated – a measure that began as early as last year.

An ambitious step to reduce costs has been to close down almost all warehouses. This also helps to more effectively manage the time-to-customer flow.

“Goods are being sold off and cash flow is being stimulated. This type of innovative strategy is being applied everywhere. Every stone is being turned.”

But he acknowledges that the market area will prioritize maintaining good relations with its customers. He also sees prospects for the future.

“Things look good and interesting in the long term,” he says.

“We have 50 percent of the GSM market share, a majority of contracts in GPRS, and we’re also very successful in both UMTS and multi-service networks.”

Kris Walmsley

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Ragnar Bäck

Reductions during expansion

► With half the world's population, the Asia-Pacific region has the fastest growing telecom market. Implementing the Efficiency Program and trying to save money might seem unnecessary, but Kjell Sörme, Executive Vice President of Asia-Pacific, takes the challenge seriously.

"Many of our key markets have not been affected as in the US or Europe. When the profit warning came out, we communicated to our market units that this is a serious situation," he says. "It was essential that everyone was united and committed to increase performance and reduce costs. The market units have done a great job to produce a savings program and implement it as quickly as possible."



Kjell Sörme

"The three target areas we are concentrating on are the total number of employees, our level of operating expenditures, and cash flow. Implementation will continue during the next three to four months."

Specifically, Kjell Sörme is decreasing the number of consultants, reviewing operational procedures and addressing the TTC



global program and synergies where that can make it more effective.

Saving money is important, but not at the risk of jeopardizing opportunities. Nor should Ericsson allow its position as preferred supplier to be weakened.

He concludes by noting that the downturn and need to save is not a unique Ericsson issue; it is an industry issue.

"But we've taken the warning signs seriously and acted quickly - the Efficiency Program is proof of this."

Kris Walmsley

Growing with clear focus

► Ericsson's Executive Vice President of Latin America, Gerhard Weise, might be envied. He leads a market area that has great potential, promising growth, and where implementation of the Efficiency Program seems to be going effortlessly. Envied or not, he should be given credit for his focused method of reducing costs and improving cash flow.

"We started in early March with steps toward the Efficiency Program," he says, "and improving our cash flow had highest priority."



Gerhard Weise

Weise explains that although Corporate set operating expense targets, each market unit in Latin America also set their own targets.

"All the units have had efficiency programs in place since May," he says, listing four areas where costs were reduced immediately: travel, training, and office-related expenses; marketing communication; re-structuring key account organizations; and in Brazil, the Mobile Internet Institute for development of mobile Internet applications has been re-evaluated. Instead a Ericsson Mobility World initiative is being established.

Additionally, the run rate in expense level for first quarter 2002 will be 19 percent lower than first quarter 2001, notes Weise, and, as with the other market areas, there will also be reductions in the number of employees.

One aspect that differentiates Latin America from most of the other market areas is that it



continues to see investment despite the general slowdown in the industry.

"We see good prospects in a number of countries, with a promising outlook for 2002. This is due in large part to change in technology such as the shift from TDMA to GSM, that means that new operators need to build out their networks."

Kris Walmsley

North America ahead of the savings goal

► In the Market Area North America, the Efficiency Program was a boost in the already ongoing work of reducing costs and adapting to an increasingly depressed market. Within the framework of the program, goals were set up to reduce costs significantly by the end of the year 2001.

Per-Arne Sandström, head of the Market Area North America, is happy with the progress that is being made.

"We are well under way in implementing the goals that were set up in March. I would say that 75 percent of the work is already done, now it is just a matter of hanging in there and not letting go," he says.



Per-Arne Sandström

The main points of action have been to cut down on investments in PCs, minimize the amount of travel, and reduce the number of employees.

"Business trips stand for a large part of the costs. We have managed to save as much as 25 percent by replacing them with video conferences, as well as challenging the need for meetings in the first place."

Other measures that have been taken are to look over the organization and find areas that can be trimmed down. By identifying redundant functions and units, the organization is further streamlined, with a resulting reduction in number of employees.

"IS/IT, Human Resources, Research and Development, Marketing, Sales. We exam-



ined the organization very closely, and no area was excluded," says Sandström.

When it comes to the future, Sandström is very positive. He sees more investments in TDMA on the horizon and predicts that GSM will boom in the future. Also, Ericsson is working with several extremely interesting customers in the CDMA area.

Tonya Lilburn



Cooperation over borders

► Karl Alsmar, head of Market Area Central and Eastern Europe, Middle East and Africa was not taken by surprise when the economic downturn hit Ericsson.

"We had seen that a slowdown was on its way, so we already had a program in place."



Karl Alsmar

The program is primarily focused on customer satisfaction. The largest customers are interviewed in order to work out ways of working more efficiently.

The main focus in the implementation of the Efficiency Program is on bringing in payments from customers. Of course this is a delicate matter, as customer satisfaction must always be central.

"It requires a great deal of imagination and creativity to find ways of reducing unpaid

deliveries. This is by far the biggest challenge," says Karl Alsmar.

However, additional measures have of course been taken. A more effective organization and use of key competence are the means with which the program's ends will be met.

"We are decreasing the number of market units by merging and closing down smaller units and letting their operations be managed by larger market units."

Strong focus is on creating competence networks in order to meet customers needs. One example is the service supply networks, where all service related responsibilities for a group of countries is run from one core hub.

A number of more general measures have also been taken to cut costs, such as reducing number of employees, looking over the use of subcontractors and sending home expatriates.

Tonya Lilburn

The market's most reliable platform

Ericsson's TSP server platform is at least twice as robust and fault-tolerant as any other commercial product. In addition, it is uniquely scalable and probably less expensive than any other alternative.

► What TSP (The Ericsson Server Platform) can offer, compared with similar platforms, is extremely high reliability, unique scalability and real time operation, meaning that transmission takes place with minimal and controllable delay.

A telecom network should never really go down. This requirement sets telecom networks apart from data networks, which are characterized by planned and unplanned service interruptions. Today as data and telecom networks are converging, the telecom industry has an advantage with respect to robustness and real-time operation. A common expression used to describe availability is the "five nines," meaning that a network is up and running 99.999 percent of the time. This is an extremely demanding requirement and means in practice that a system will be down less than five minutes per year. This time must include all service interruptions, both those that are due to system faults and those that are required for upgrades or expansion. Other leading commercial platform suppliers promise only 99.95 percent availability, meaning about five hours' down time per year.

"We have not yet reached our goal. Currently we only guarantee 99.99 percent availability, or about one hour's down time, but when TSP3 is released in the autumn, we will achieve 99.999 percent," says Bo Andrén, who heads the TSP product management.



Bo Andrén

This level of reliability may seem unnecessarily high, but availability is an extremely important characteristic for operators. If an HLR (Home Location Register) node goes down, for example, the mobile network becomes unavailable for all registered subscribers. This means lost revenues for the operator and that subscribers cannot be sure that the network will be available when they need it.

Meeting high demands

TSP is Ericsson's platform for network servers for the service and control networks. TSP is already on the market in products for TDMA and CDMA networks. These include HLRs, which are databases that keep track of subscribers, and Service Capability Servers, which provide extra services for subscribers in fixed and wireless networks. TSP is also a strategic choice for servers and control nodes that require the highest availability plus scalability for the very large systems found in 3G and IP-based networks. Examples of such nodes are AAA (Authentication, Authorization and Accounting) and MGCF (Media Gateway Control Function).

"The platform meets the highest demands for reliability, scalability and robustness," says Bo Andrén, adding that customers have been impressed by the TSP's specifications.

To date, TSP products have been installed

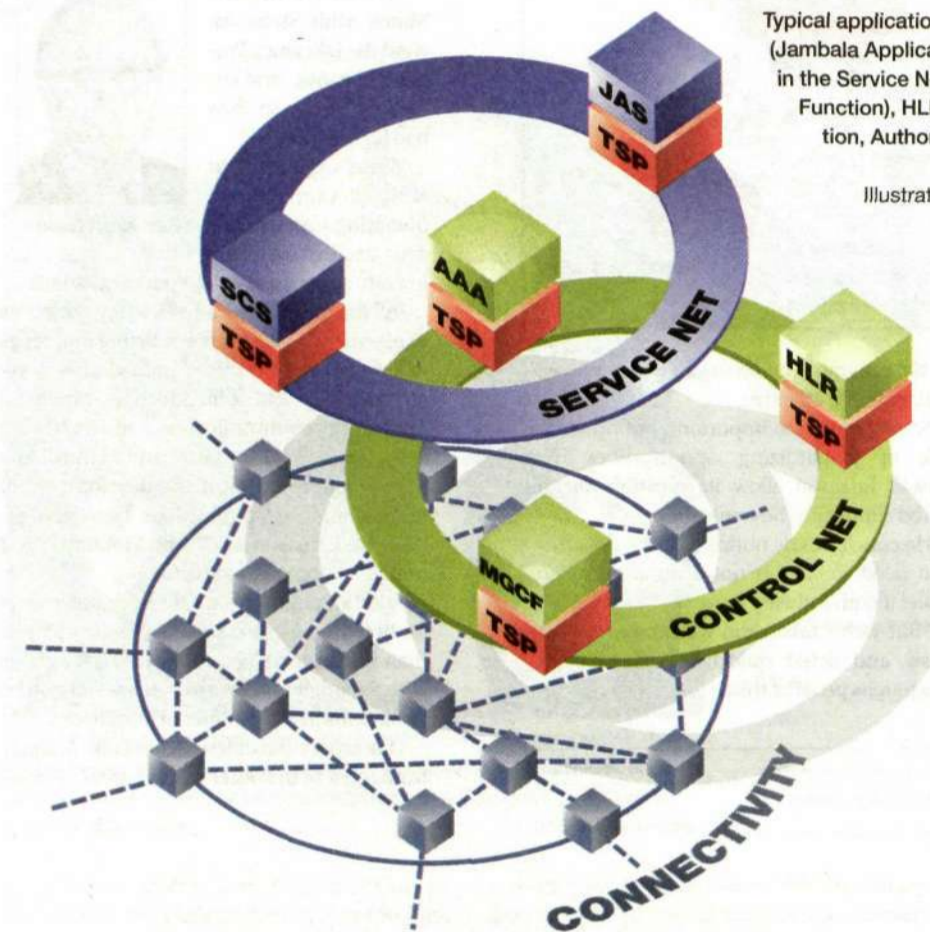


Illustration: Martin Gradén

FACTS/TSP

The new TSP generation uses the AXE infrastructure to enable extremely reliable servers with high availability to be built. This results in a unique combination of telecom-grade performance in an open server platform for the same price as a traditional commercial server.

Previously, TSP was based on a backplane that allowed some supplier-specific configurations, which meant that the product was somewhat dependent on a given supplier or technology. Now all cards are being encapsulated in so-called Plug-in Units that use the standardized GEM interface, which also provides telecom-grade characteristics. This makes it easy to mix cards from different suppliers, such as Sun and Intel, and with different technologies, so that components that are optimized for traffic, I/O or signaling can be combined using the same building practice.

Thanks to an HA cluster SW design, which is two to four years ahead of the competition, higher availability can be achieved in software. All card components (power, Ethernet ports, etc.) are redundant, and all software and data on each processor card is copied to another card using a unique distribution algorithm in TelORB. In this manner, entire nodes can be made redundant.

with a total of 20 operators in 13 countries, and some 10 million subscribers are connected to TSP-based systems.

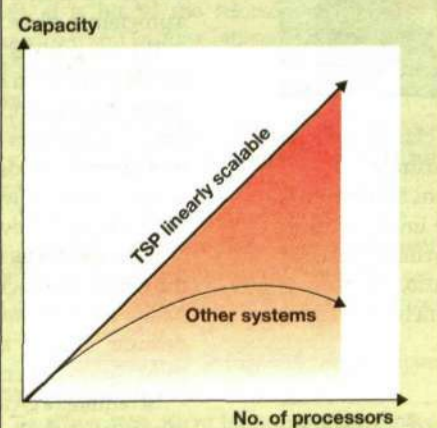
"This was achieved over a period of about 20 months. Naturally, there were problems with the first products that were rolled out, but over the past six months, we have seen continuously improving stability. Ericsson employees have done a fantastic job, and we have received very positive comments from key customers. Some operators have even replaced equipment from other suppliers with TSP servers," says Bo Andrén.

TSP is uniquely scalable, meaning that it is possible to build both small and medium-size systems using the same components and

functional units. This characteristic is also necessary to allow operators to expand at the desired rate. Scalability is achieved using unique components that were developed by Ericsson. The key factors are extremely efficient internal signaling and a unique distribution algorithm.

TSP IS LINEARLY SCALABLE

If the number of processors in a TSP-based system is doubled, capacity is also doubled. In other systems, the overhead for communication and administration increase as more processors are added such that system capacity may actually decrease.



TSP employs a component-based architecture consisting of a number of functional units embedded in a framework of open interfaces. This allows the same software to be run on different hardware. The TSP uses primarily commercial components. Only the most essential components for adding value in terms of robustness and scalability are developed by Ericsson.

The unique component that imparts these special characteristics is TelORB, which is a

software package that has the ability to execute on different processor architectures and with different operating systems, making it easy to adapt to general technical developments without incurring high development costs.

TSP also re-uses much of what was developed for the new AXE, including the Generic Ericsson Magazine (GEM). Linux, which has had a tremendous market impact, will also be introduced in the TSP processor cluster toward the end of the year. TelORB will then support the Linux components with respect to scalability and availability.

TSP also contains basic functions that are common to several applications, such as a complete and standardized management interface and protocol for network signaling. This allows the application designer to focus on the application itself.

TelORB is thus the core component in TSP and the design element that guarantees high reliability and scalability. TSP has a cluster of loosely coupled central processors that allows the platform to be scaled from very small systems to nodes with several dozen processors. This makes it possible to create extremely powerful server nodes in which capacity can be increased linearly by adding new processors.

Years ahead of competitors

The database used by TelORB does not reside on a single hard disk, but is distributed among all the processors in the system. Reliability is ensured in that another processor can take over, if one should crash. The same mechanisms are also used for identifying and handling software faults. The risk of a software fault hanging the system is thus eliminated. If a fault occurs, the system is automatically restarted in real time. In case of a catastrophe, such as a fire, all data is replicated in a cluster in another geographic location.

"We believe that we have several years' head start with our TSP platform," says Bo Andrén. "While we have naturally had problems, we deliver a telecom grade product. The greatest difficulties were related to SS7 signaling in the network, but we are now replacing those components in the product being launched this autumn with a solution developed by Ericsson Infotech.

"We can also claim that TSP is a less expensive solution than what our competitors can offer. According to our data, TSP means 30 to 40 percent lower costs for operators," concludes Bo Andrén.

In closing, it should be noted that the TSP project is being conducted by an unusually cohesive team. The core members are design engineers who have worked with the project from the start and have become extremely skilled in their field of expertise.

Site masts get new ears

By amplifying received signals from mobile phones on the antenna mast, cellular networks gain many advantages. Cells can be made larger, resulting in networks that need fewer base stations, but above all, fewer calls are lost, which means significant cost savings.

► The unit that delivers these benefits is a 20 to 30 centimeter long box weighing just a few kilos that is called a Tower Mounted Amplifier, TMA. A TMA provides the most benefits when the output power of the base station is significantly greater than the received signal from mobiles. This is true for most base stations in rural areas, for example, where the greatest range is desirable, but may also apply in smaller cities or densely populated areas where better indoor coverage is needed.

An important design consideration is reducing transmit power for mobile phones as much as possible in order to increase battery life and reduce interference.

Increased revenues

"We have seen that TMA can cut dropped calls in half, which means as much as five percent greater revenues for operators," says product manager Ulf Sundström. "Interest in TMA is increasing. Last year we sold about 100,000 units, and we expected an increase by 20 to 25 percent this year. Many units were shipped to Canada and Mexico for GSM 1900 systems, where, with TMA, we can re-use the cell plans for TDMA 800."



Ulf Sundström demonstrates the TMA amplifier, which is mounted on the mast near the antenna where it boosts signals received from mobiles.

Photo: Ecke Küller

With higher frequencies, the need for amplifiers increases, since mobile phones for these frequencies have lower maximum power than 900 MHz, for example. TMA is therefore used to a greater extent for GSM 1800 and 1900.

Many operators also use TMA on 800 and 900 MHz systems.

A mast-mounted amplifier for WCDMA systems called Antenna Systems Controller (ASC) is also being developed and will operate

as a TMA with enhanced functionality. One parameter that sometimes has not been taken into consideration in planning of the radio network is that power dispersion may vary between mobile phones from different manufacturers. The extra amplification that TMA provides can partially compensate. The result is fewer dropped calls, but also increased quality of communications, which is important, particularly for data communications.

Several systems

An important application area is co-location sites where the same antenna receives signals for several systems, such as GSM and CDMA. Splitters can separate these signals, while TMA can compensate for the losses arising in the splitter.

"Ericsson is currently the world's leading supplier of TMA units, but we are meeting intense competition from Ramec in the US and the Swedish company LGP Telecom," concludes Ulf Sundström.

Lars Cederquist

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WLAN works with CDMA

At the CDMA Congress in Hong Kong, Ericsson demonstrated its 3G platform CDMA2000 1xEV-DO. This demonstration also showed how CDMA and a wireless local area network (WLAN) can work together.

► The objective is that WLAN, which offers extremely high transmission capacity, will supplement the mobile network in areas with high traffic density. Operators can thus expand their service offerings to include high-speed data in selected hot spots with high traffic density.

WLAN will offer a multi-access network in which the user will always be connected in the most optimal manner.

"We have succeeded in combining Ericsson's WLAN solution with a first prototype of tomorrow's 3G CDMA standard for data communications," says Magnus Gunnarsson from Ericsson's offices in San Diego.

CDMA is a standard that is evolving toward 3G and high data speeds. From CDMAOne, it is being developed into CDMA2000 1X. During 2002, CDMA2000 1xEV-DO will be released and will support new advanced services with data transmission speeds of up to 2.4 Megabits per second over a 1.25 MHz channel. WLAN technology can already deliver 11 Mbps, and as of next year, speeds will increase to 54 Mbps.

This combination of technologies is also being evaluated for the WCDMA 3G standard, for example, where Ericsson and Norwegian operator Telenor initiated a project in March intended to develop an integrated solution.

Lars Cederquist

Lean fiber turns eyes

"Interest in fiber-optic antenna systems has never been greater. We now have more than 20 projects underway throughout the world," says Ericsson product manager Conny Dahlfors.

► Optic fiber has the desirable characteristic that it does not dissipate power even over distances of several kilometers. This makes it ideal for use in mobile antenna systems, primarily in indoor systems for large building complexes, in which the distance between radio base stations and antennas may be great.

The basic principle is that the base stations are located in an equipment room where the radio signal is converted to an optical signal that is transported via fiber to so-called

Remote Units. These units then convert the signal back to a radio signal that is transmitted by the antennas.

"Previously many operators were reluctant to install fiber because it was expensive," says Conny Dahlfors. "Today, however, the trend is toward lower prices. In addition, you can connect up to eight antennas to the same Remote Unit, which further reduces costs."

Fiber optics eliminates thick bundles of cables. Network expansion is simplified, and it is easy to let several operators share the network and monitor the system. Ericsson's largest market is Japan, where tenders have been submitted for a large number of WCDMA installations.

"We now also have an interesting project in Manhattan that can result in a breakthrough in the US market," concludes Conny Dahlfors.

Lars Cederquist

For many working women around the world, pregnancy marks the end of their careers. In most places, laws regarding women's right to continue working after taking parental leave are weak. In many countries, however, Ericsson is trying to be a leader, particularly in order to avoid losing valuable employees.

► It is a Tuesday and time for the weekly meeting of the communications department at Ericsson in Austria. The youngest person present at the meeting is Katharina Haertel, six months old. She is sitting on her mother's knee and staring wide-eyed at the photographer's flashing camera. Her mother, Daniele Haertel, is PR and Internal Communications Manager at Ericsson in Austria and has been working half time, partly from home, since Katharina was two months old. But when Daniele Haertel does go into the office, Katharina goes with her.

"I'm in the office two mornings a week and the rest of the time I'm linked up from home via a fixed connection that the company arranged. Of course, I'm also accessible via my mobile phone and can also connect my laptop through it if I should need to," says Daniele Haertel.

In Austria, women are entitled to full paid leave for the eight weeks preceding and the eight weeks following childbirth. After that time, they are offered ATS 5,000 or roughly USD 300 per month for 18 months, should they choose to stay at home.

"Most women, however, equate pregnancy with the end of their careers. If you're gone for six months or a year, without being able to stay abreast of everything that is going on within the company, it becomes difficult to return to work, especially if one has a more senior position. And if you do return, it's quite possible that the job you once held has been taken over by someone else," says Daniele Haertel.

Part-time from home

"Although changes are being made on this front in Austria, it is a rather slow process. Many of the larger companies talk about implementing various kinds of family programs, specifically aimed at providing women with the opportunity to continue working even after childbirth, but only a few are actually doing anything concrete," says Daniele Haertel.

Ericsson in Austria is one of the companies that has taken action. Today, new mothers are given the option of working part-time and from home in order to stay in contact with the job and retain their position.

"It's important that we can keep competent employees, which is why we want to support women so that they can return to the workplace. I'm also working to get more women into managerial positions, and this is one way of making that easier," says Doris Mandl-Sponer, Human Resources Manager at Ericsson Austria.

More structured

Gerhard Gindl, head of the communications department and acting personnel manager last year, also had a hand in this.

"I've been wholeheartedly behind this effort. I want Daniele Haertel to remain a manager in my department. I haven't seen any problems at all with the arrangement, and in fact I think it has functioned extremely well. Now that she is working half time, some things are actually running more efficiently than before, since we need to be more structured when we do meet in order to plan our operations," says Gerhard Gindl.

I meet up with two other new mothers in a city park in Vienna: Rika Dijkstra and her seven

Pioneering



Ericsson is a pioneer among companies in Austria when it comes to taking advantage of the expertise of female employees by giving them the opportunity to combine parenting with their careers. Daniele Haertel, with her daughter Katharina, Rika Dijkstra, with her son Leon, and Katharina Praschl, with her daughter Anna, have all found a simple solution to maternal leave. Daniele Haertel is working part-time during her leave, Rika Dijkstra is combining working at home with work at the office, and Katharina Praschl plans to work part-time. Photo: Ecke Küller

month old son Leon, and Katharina Praschl and five-month-old Anna. Rika is a Financial Controller at Ericsson Enterprise and happy about the possibility of being able to continue working.

"For me, it would be too boring to just stay at home. I need my work and wouldn't stay at home, even if I could afford to. I've been working at the office four half days a week since

Leon was two months old, in addition to working from home," she says.

Her partner takes care of Leon two afternoons a week. This is unusual in Austria, for economic reasons, but primarily because in Austria, like many other countries, the women have traditionally stayed at home with the children, while the men have pursued careers.

"Of course you hear comments from people who say that I shouldn't be working and that I should stay at home with my child, but I have a need to work as well."

Part-time position made to suit

Katharina Praschl is Marketing Director for the market area Central Europe, Middle East and Africa at Enterprise.

mothers

She is currently negotiating with her manager on how to set up a part-time position that suits her situation. Initially, when she became pregnant, she thought that her career was over.

"When I told my manager, Mats Halvorsen, that I was expecting a child I thought he would be angry, but he instead congratulated me. He has been really supportive."

She also has a computer hookup at home where she regularly checks her e-mail and stays in touch with her department.

"We all have different solutions based on how we work. The system is quite flexible in that respect," says Daniele Haertel.

Babies in the office

She and the two others are pioneers when it comes to providing mothers with the option of combining children and careers. It is largely based on their own initiative that Ericsson has backed them up and provided them with the resources.

This is something new. In the beginning, they had a difficult time, for various reasons, obtain-

ing permission to bring their infants into the office. Now the company is discussing the possibilities to configure an easily accessible conference room on the ground floor with a changing table and other essential items.

And interest is now starting to grow, both within and outside the office.

"We've noticed that it is an advantage when we're trying to hire people. When we were in the process of hiring a web manager, several of the applicants were women and they became quite interested when I explained how I work and the opportunities that the company offers women who work here. Actually, it was to one of these women we subsequently offered the position and she accepted," says Daniele Haertel.

"It feels as though the three of us have opened a door. Now we hope that our example will motivate others to follow in our footsteps," she says.

Lars-Magnus Kihlström

lars-magnus.kihlstrom@lme.ericsson.se



When Daniele Haertel has meetings with the communications department, she takes along her daughter Katharina, age six months. Now the company has plans to configure an easily accessible conference room on the main floor with a changing table and other essential items.

FACTS/PARENTAL LEAVE AROUND THE WORLD

Argentina

In Argentina, maternity leave lasts 90 days. The period is divided into 45 days before the birth, and 45 after the birth. During maternity leave, the mother receives salary compensation equal to her gross wages without any amount withheld for social security or taxes. This compensation is paid by the state.

Australia

In Australia, it is a legal requirement to provide one year of unpaid maternity leave. General practice is to provide 2 to 12 weeks of paid leave for the primary care

provider, and one week of parental leave for the partner of the primary care provider. Ericsson in Australia provides six weeks of paid parental leave to the primary care provider and one week of paid leave to the partner of the primary care provider.

such that Ericsson pays the employee her monthly salary and, at the end of the maternity leave the SSC repays the company. After this period, the female employee has the right to take one hour daily for three months for lactation.

This cost is assumed by the company.

Colombia

According to Columbian law, parental leave is 12 weeks for women and the social security company (SSC) covers salary during that period. The procedure is

child reaches the age of three. After the mandatory maternity leave has elapsed, the right to parental leave can be used by the child's father. A woman is entitled to nurse her child for two hours a day until the child is one year old, if she has started to work full-time when the child is six months.

When mandatory maternity leave has elapsed, the female employee has the right to work half time. If the child needs greater care and attention due to its health and development, the mother or the father has the right to work part time until the child reaches the age of three.

Croatia

In Croatia, a female employee has the right to maternity leave during pregnancy, childbirth and until the child has reached the age of one year.

Maternity leave begins 45 days before the expected delivery date and may be extended until the child is one year old. Mandatory maternity leave is from 28 days before delivery until the child is six months old. For twins, or for the third or any subsequent child, a female employee may take maternity leave until the

New Zealand

If a woman has been in the employ of a company for the 12 months immediately preceding the expected delivery date of the child, she is entitled to up to 52 weeks of unpaid leave. Ericsson is not obliged to pay any money during parental leave. The leave can be distributed on either side of the

delivery date but cannot total more than 52 weeks.

If the employee's position cannot be kept open, preference will be given for any other position becoming vacant in the company (for which the employee has the appropriate qualifications) for a period of 26 weeks.

If the husband takes time off as paternity leave, this is counted as part of the wife's leave. They cannot take leave simultaneously.

Sri Lanka

For the birth of her first or second child, the employee will be entitled to a total of 84 working days fully paid leave. It is possible to use 14 of these days prior to the birth.

For the third child, the mother receives 42 days of paid maternity leave. The woman must inform her employer of her due date in good time. A female employee who is nursing a child under one year of age is allowed two one hour feeding breaks per day if daycare is not provid-

ed by the employer. Where daycare or another suitable facility is provided by the employer, feeding breaks are reduced to thirty minutes each. If the daycare facility is located far away from the work place, the practice is that nursing mothers combine the two breaks to leave the work place early or report to work two hours late.

No employer is allowed to terminate the employment of a female employee during her pregnancy or maternity leave.

In Sri Lanka, there have been successful pilot projects to allow women to work from home, if they want to remain in the home after the end of their maternity leave.

Sweden

In Sweden, parental leave is paid for 360 days. It is permitted to take parental leave from the sixtieth day prior to the expected date of birth. If a woman has a physically demanding job, she can also receive pregnancy benefit during the time she is expecting the baby.

The parent who stays at home with the child receives 80 percent of his or her salary during this time, up to a maximum of USD 2,000 per month. The money is paid from national insurance funds. Anyone earning less than USD 2,000 per month receives a 10 percent supplement from Ericsson for 60 days.

Anyone earning more than USD 2,000 receives 90 percent of their salary for 60 days, after which the company pays a supplement to bring the amount up to 80 percent of their salary for 120 days.

In the case of multiple births, the parents are entitled to a further 180 days of benefit for each child after the first born. The parents can divide the leave as they please, with one month specially reserved for the father (the "paternity month"), but the time must be used before the child is eight years old.

Following the birth, the mother or father is entitled to be free from their work for one and a half years, after which they are entitled to work 75 percent of full-time until the child is eight years old.

Vacancies AT ERICSSON

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<http://jobs.ericsson.se>. To advertise, mail your adverts to: employment.adverts@lme.ericsson.se.

Contact: Ake Ohnback, KAM, Phone +1 876 754 8659.

Application: Noelia Borrego, HR Representative, Mail: noelia.borrego@ericsson.com

CONTACT NO. 12 2001

UPDATED 15 JUNE

JAMAICA - MU CARIBBEAN

Market Unit Caribbean covers an area of 15 countries and 15 dependencies with some 27 million people.

The telecom markets in the area is in the process of deregulation with a number of possibilities within mainly cellular and datacom networks.

GSM Ericsson Local Support Engineers BSS/SS/OSS.

We have an interesting challenge for you within our new GSM contract in Jamaica.

The main responsibilities for this position will be to provide first line technical support for resolving complex problems at highest technical level, handling of customer's CSRs and performing on call duties.

BSS

First Line Support Engineer

● The main responsibilities for the BSS Support Engineer will be to investigate and troubleshoot activities in the BSS

area at the highest technical level and to address customer's expectations and needs.

The competence requirements are a minimum of 5 years working experience on AXE 10, of which at least 2 years should be in first or second line support of BSS area for CME20 or CMS40.

Candidate must have experience in loading correction packages and doing SW upgrades, as well as good ASA/PLEX knowledge.

Candidate should also have excellent english communication skills.

SS

First Line Support Engineer

● The main responsibilities for the SS Support Engineer will be to investigate and troubleshoot activities in the MSC/HLR/SCP area at the highest technical level and to address customer's expectations and needs.

The competence requirements are a minimum of 5 years working experience on AXE 10, of which at least 2 years

should be in first or second line support of SS area for CME20 or CMS40.

Candidate must have experience in loading correction packages and doing SW upgrades, as well as good ASA/PLEX knowledge.

Candidate should also have excellent english communication skills.

OSS

First Line Support Engineer

● The main responsibilities for the OSS Support Engineer will be to:

investigate and troubleshoot activities in the OSS/SOG/BGW area at the highest technical level and to address customer's expectations and needs.

The competence requirements are a minimum of 3 years working experience in OSS/SOG/BGW area, of which at least 1 year should be in first or second line support for CME20 or CMS40.

Candidate should also have excellent english communication skills.

First Line Support Engineer

● The main responsibilities for the Support Engineer will be to investigate and troubleshoot activities in the MSC/AP/Jambala/ Prepaid area at the highest technical level and to address customer's expectations and needs.

Knowledge in all or most of the areas mentioned above is required.

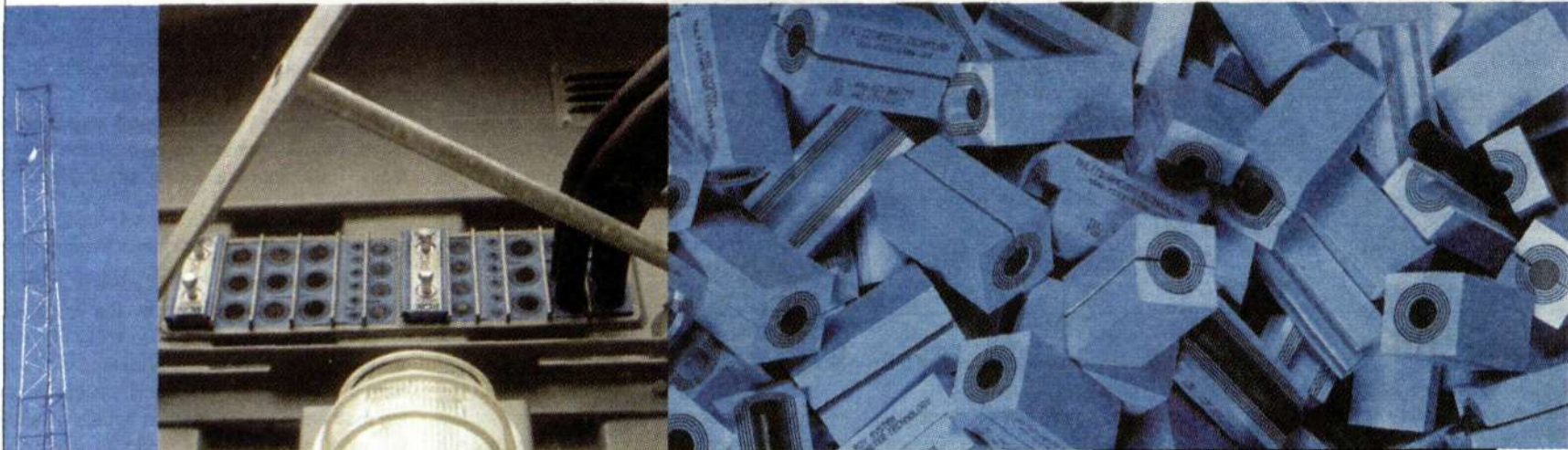
The competence requirements are a minimum of 5 years working experience on AXE 10, of which at least 2 years should be in first or second line support of CMS8800 network.

Candidate must have experience in loading correction packages and doing SW upgrades, as well as good ASA/PLEX knowledge.

Candidate should also have excellent english communication skills.

Contact: Martin Paquette, ELS Manager, Phone +1 787 771 1744.

Application: Noelia Borrego, HR Representative, Mail: noelia.borrego@ericsson.com



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3G film took bronze



► Ericsson's 3G film, "Into the mobile future," has been awarded the bronze prize at the IVCA gala in London. In 2000, the film's predecessor, "The third generation," won the third prize at the Swedish Guldklappan (the "golden clapboard") awards. The manuscripts for both films were written by Johan Sköld, Creative Director at Ericsson Radio Systems.

"It's wonderful that the films have won these awards, particularly as they have been made entirely without the involvement of an advertising agency. This is the result of a unique collaboration with the producer, Pehr Arte, Nordisk Film & TV AB, and the freelance director, Niklas Hansen," explains Johan Sköld.

Johan Sköld with the bronze prize for the film, "Into the mobile future."

Photo: Ecke Küller



Taiwanese Minister of Communications Chu-Lan Yeh meets with Ericsson CEO Kurt Hellström.

Photo: Ecke Küller

Schools connected

► NetDay Community Initiatives is a community driven project connecting students and their teachers with the necessary resources to facilitate learning through education technology.

In New Zealand, NetDay 2001 was the final NetDay as almost all schools in the country have now been connected. Ericsson was sponsoring the activities in Hawke's Bay, and Ericsson employee Brian Henderson was the regional coordinator. The main action was at Hastings Central School, where a crew of about 30 volunteers turned up to run cable to about 80 outlets fed by three hubs.



Matt Rowbotham was one of the volunteers at NetDay in Hawke's Bay, New Zealand. He spent one Saturday drilling, feeding and dragging cable through the ceiling of a block of classrooms.

Taiwanese ministerial visit

► At the beginning of June, Ericsson and Creative World were honored by a visit from the Taiwanese Minister of Communications, Chu-Lan Yeh.

Together with 45 members of the Joint Business Committee, Chu-Lan Yeh was visiting Sweden to promote trade between the two countries.

Ericsson CEO, Kurt Hellström, who chairs the committee, received the visitors upon their arrival at Telefonplan facility in Stockholm.

Wireless systems gets new center

► On June 6, the Swedish Royal Institute of Technology's center for wireless systems, Wireless@KTH inaugurated its premises in Kista, outside Stockholm. Wireless@KTH represents a collaborative effort between the Royal Institute of Technology, Ericsson, Microsoft, Nokia and Telia. Its purpose is to promote education and research in wireless systems.

Bengt Broman, technical director at Telia Mobile AB and chairperson of Wireless@KTH, and Anders Flodström, the rector of the Royal Institute of Technology, cut the ribbon. From Ericsson, Håkan Eriksson, head of research, participated with a presentation of 3G and future mobile systems.

In connection with the inauguration, the partner companies exhibited their products within the wireless systems theme.

Smart phone wins golden prize

► Ericsson's combined mobile phone and palmtop computer, the R380 "Smartphone", was singled out as Innovation of the Year at the Mobile Gala on June 7 and was awarded with the newly instituted prize, the Golden Mobile.

The Mobile Gala was initiated by the Swedish mobile telecommunications magazine *Mobil* to recognize innovative products, services and companies in the Swedish mobile communications market, as well as the companies that market them. The premiere gala took place at the Museum of Modern Art in Stockholm.

"The plan is for the Mobile Gala to become an annual event focusing attention on the huge amount of creativity, innovation and entrepreneurial talent in the mobile sector, a kind of Academy Awards Gala for mobile phones," explains Niclas Lidström, editor-in-chief of *Mobil*.

The jury that selected the winning products included Östen Mäkitalo, doyen of the mobile sector in Sweden, and Håkan Lans, one of Sweden's most successful inventors. The jury motivated its choice by noting that, although Ericsson does not have a monopoly on the concept of a combined palmtop computer and mobile phone, the product is perfectly attuned to the times.

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Investing and the stock market are Greger Larsson's great passion. After writing to Ericsson's CEO, Kurt Hellström, via e-mail, he gained experience as a trainee in the Investor Relations Department – one week in Stockholm and one in London.

Photo: Ecke Küller

Smitten by stocks since childhood

When he was only eight years old Greger Larsson decided that he wanted to work in the investment market as an adult. He is now 15, and still interested. After sending an e-mail to CEO Kurt Hellström, Greger obtained the work experience position he had dreamed of – two weeks in Ericsson's Investor Relations Department.

► Greger Larsson is in the eighth grade at the Carlsson School in Stockholm. When it was time for him to arrange a work experience position, he wrote to Kurt Hellström.

"I described myself and said that I had always wanted to work with investments," he says.

Lisbeth Tylén, Kurt Hellström's secretary, answered the letter and invited him to spend two weeks in the company. Greger Larsson was in the Stockholm office for one week, and in London for the second week.

"In Stockholm, I helped to read newspapers and find items that are of interest in relationships with investors. In London, I helped to summarize business events during the first quarter of the year. I was also able to attend meetings with analysts; that was the most fun of all."

Roland Klein, Senior Vice President, Communications, invited Greger to live with the Klein family in London.

His schoolmates did their work experience in companies ranging from advertising agencies to restaurants, but Greger Larsson thinks that his experience at Ericsson is the best in comparison.

Having gained insight into how a large international company handles investor relations he is even more certain about what he wants to do as an adult.

"I am glad that I was able to come here. Investing and the stock market are my great passion."

Jesper Mott

jester.mott@lme.ericsson.se

UPCOMING

July 3–6: Comdex Infocom in Buenos Aires, Argentina.

July 20: Ericsson presents its interim report for the first six months of 2001.

August 23: *Contact*, Number 13, is published.

August 24–27: The "Taipei Telecom" trade fair takes place in Taipei, Taiwan. At the fair, Ericsson will demonstrate 3G, consumer products and accessories, Bluetooth, Internet applications and Mobile Internet.

UPDATES

June 11–15: The 3G World Congress took place in Hong Kong.

June 12: "5minutes" – Ericsson's new Web-TV program premiered. See new program each Tuesday.

inside.ericsson.se/5minutes/

June 26–27: Engine Life visited Washington, D.C. Visitors were shown how broadband will affect their daily life.

NEW ASSIGNMENTS

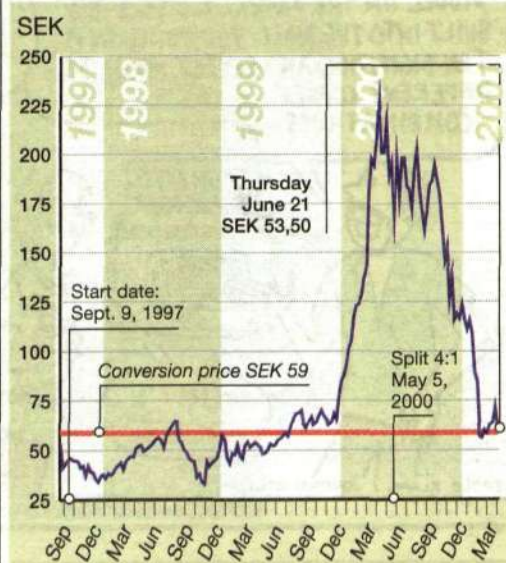
Lars-Erik Blom has been appointed Global Account Manager for the SONG Networks global operator.

Kennet Rådne, former head of Ericsson Internet Solutions, will leave division Global Services to pursue new opportunities outside of Ericsson.

Division **Multi-Service Networks** and division **Data Backbone and Optical Networks** will be integrated into one division called **Multi-Service Networks**, effective July 1, 2001. Einar Lindquist, based in Stockholm, will be head of the combined division.

A new market unit will be created for the Nordic countries, with responsibility for all market related activities in the region. Steinar Tveit has been appointed head of the new market unit.

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>

