

# contact

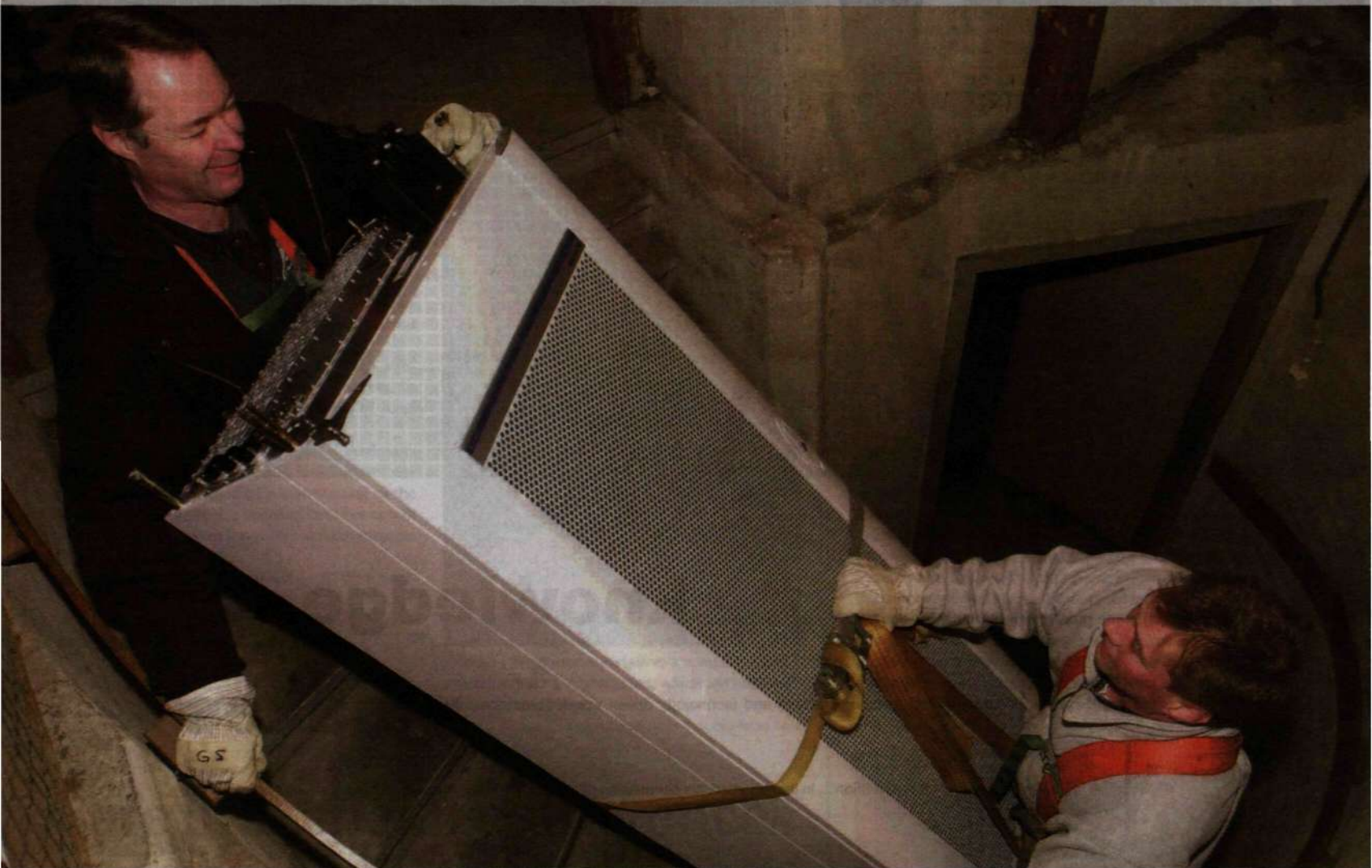


PHOTO: ECKE KÖLLER

## Nordic 3G networks rising 10



PHOTO: J-BILD GÄVLE

Göte – an important link in the TTC chain

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PHOTO: ECKE KÖLLER

Mobile images appeal to Japanese

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In some professions there has always been a need for renewed **knowledge** and continuous training. However, in today's fast changing markets and technology driven world, fierce competition **makes** almost all professions subject to this condition ... In this situation, it's our mission to bring outstanding know-how, new learning opportunities and networking to **all** Ericsson employees. Based on your professional role and **the** corporate strategies, we will act as your guide to knowledge, networking and learning – it makes no **difference** where you are.

**Ericsson University**

# GSM system connects Kabul

Ericsson has begun installing a mobile system in Kabul, the capital of Afghanistan. The installation is part of Ericsson Response's global efforts and will facilitate the World Food Program's relief efforts in the country.

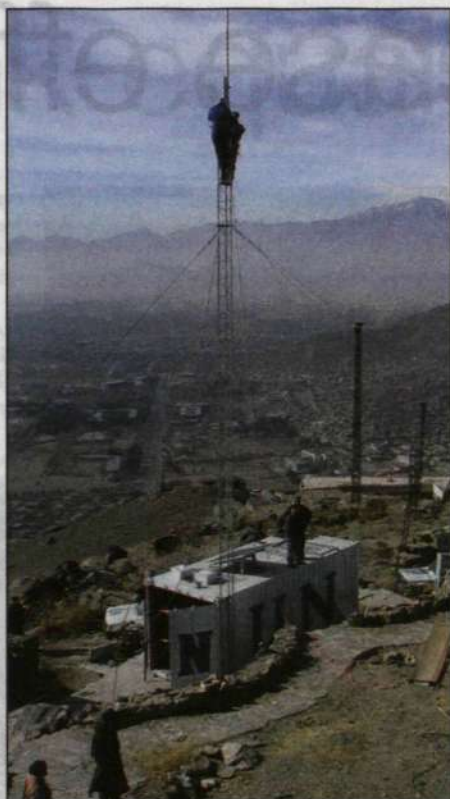
The complete GSM system covers Kabul and could also be taken in to commercial use in the future.

"This is a unique project and so far the biggest one that Ericsson Response has ever undertaken. It's completely in line with our long-term involvement and our cooperation with the United Nations. We are proud that our equipment and our expertise can improve the quality and effectiveness in the United Nation's relief efforts," says Ericsson President and CEO Kurt Hellström.

The GSM system has capacity for 5,000 subscribers. Initially, 200 people will have access. In addition, Ericsson is donating hundreds of R250 mobile telephones.

Ericsson Response is working with several partners in Afghanistan. The Swedish satellite communications company Swe-dish is contributing all the satellite equipment that is installed in Kabul as well as a modem that makes it possible to communicate to Sweden via satellite.

The operator Telia Mobile will connect from satellite to its existing GSM network in Sweden. The country code for subscribers in Kabul will therefore be the same as for Sweden (+46).



Ericsson Response is installing a complete GSM system in Kabul, Afghanistan, which will help the UN in its relief efforts.

PHOTO: WORLD FOOD PROGRAM

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# Safe and cheap conferences

Ericsson Global IT Services has developed a teleconferencing system that is expected to provide the company with savings of USD 2.8 million annually on telephone calls alone. Participants also obtain a personal security code, making it extremely difficult for anyone to eavesdrop on telephone meetings.

The efficiency measures within Ericsson and the uneasy global climate have together contributed to a reduction in business travel, and the number of telephone meetings has increased noticeably within the company. This alone means major savings for Ericsson. However, savings can be even greater if it is possible to make teleconferencing more cost efficient.

"Ericsson can save large amounts of money by using its own teleconferencing system rather than purchasing the service from an external supplier," explains Fred Kudrén, product manager for the Voice and Video department at Ericsson Global IT Services.

Call charges for teleconferencing in Sweden and the US alone currently amount to approximately USD 3.8 million annually. The new system developed by Ericsson Global IT Services is already operational and available to Ericsson employees worldwide. The cost for calls using this system is only a few cents per minute, which is several times lower than what Ericsson pays for corresponding services from, for example, Telia in Sweden or AT&T in the US.

"If use of this system becomes common within Ericsson, we will save at least USD 2.8 million per year in call charges, if we continue to hold teleconferencing meetings to the same extent as today," he explains.

The low cost for calls is largely due to the fact that the system operates via Ericsson's global internal telecommunications network, ECN. Anyone wishing to book a teleconferencing meeting can do so via his or her mobile phone or the intranet.

All new users receive a personal code and before each new meeting, the persons invited receive a security code to minimize the risk of unwanted participants. Once the conference has begun, participants can follow the meeting visually via a web page and can even record extra interesting sections on sound files.

"The goal is to integrate the system with Outlook later in the year. We will also be adding software so that conference participants will be able to share PowerPoint documents and the like," says Fred Kudrén.

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To use EGIS' new teleconferencing system, go to:

[www.teleconferencing.ericsson.se](http://www.teleconferencing.ericsson.se)

## Ericsson and Samsung enter patent agreement

Ericsson has secured a global license and patenting agreement on mobile technology with Korean electronics company, Samsung. The agreement means that Samsung has the right to use Ericsson's patents for mobile technologies for GSM, TDMA, GPRS, WCDMA and EDGE in its products. For this privilege, Samsung will pay royalties to Ericsson, which also obtains the right to use Samsung's patent solutions in its products.

## New agreement for improved cash flow

Ericsson has sold test equipment to a group of financial institutions for almost USD 760 million. The agreement also entails Ericsson then renting the equipment.

"This arrangement is a further successful step in our efforts to free up capital," explains Ericsson's CFO, Sten Fornell.

Ericsson reached a similar arrangement recently regarding test, measuring and production equipment at production units in Sweden.

## 3G handset contract with LG Electronics

A new contract with LG Electronics gives the Asian consumer electronics manufacturer access to Ericsson's handset technology in 2.5G and 3G/UMTS. LG Electronics is one of the major players in the wireless industry and this deal helps position Ericsson as a leading supplier of the core mobile handset technology.

"The agreement gives a boost to the 3G handset market, and is the second agreement for Ericsson Mobile Platforms, with Sony Ericsson as the first customer," says Tord Wingren, president of Ericsson Mobile Platforms.



Marianne Nivert, president of Swedish operator Telia, and Steinar Tveit, head of Ericsson's Nordic and Baltic Market area, signed the important Engine contract.

PHOTO: ECKE KÜLLER

## Engine solution to strengthen Telia

Ericsson's leading position within multi-service networks has now been further strengthened by one of the largest and most important Engine contracts to date. Under the terms of the contract, Ericsson and Skanova will modernize Swedish operator Telia's wireline network through an upgrade to Engine.

The contract is a breakthrough in the Swedish market and the first step in the modernization of Telia's wireline network and its transition to a multi-service, IP-based network.

Skanova is responsible for operating Telia's wireline network, which will be modernized by replacing old access equipment with Engine Access Ramp while new telecommunications servers will also be installed. In total, there will be 600,000 new lines.

# New company will increase efficiency

More clearly defined delegation of responsibility, increased efficiency and straighter reporting channels.

These will be some of the results when Ericsson creates a new company for all operational activities in Sweden and consolidates 15 companies under one roof.

**Ulf Berg**, now president of Ericsson Microwave Systems in Mölndal in Sweden, will serve as President of the new company. He explains some of the advantages of consolidating the activities in a single company.

"The new company will form a legal structure to provide 100-percent support for all operations within our business and core units. We will have a more clearly defined delegation of responsibility and increased efficiency. Work routines for billing and accounting, for example, will become more efficient when they are concentrated in one place," he says.

Other advantages of the new organization will be reduced administration, for example in terms of logistics, deliveries, accounting and personnel questions, as well as straighter reporting channels. The new structure will also make it easier to control, monitor and gauge economic efficiency. Administration procedures for internal transfers will also be simplified, thereby creating greater flexibility.

## Natural choice

Per-Arne Sandström, chief operating officer at Ericsson, will be the chairman of the new company. He believes Ulf Berg was a natural choice for the position as president.

"I have worked with Ulf Berg for about 10 years. He has the right experience and skills for the job. He was also responsible for preparations leading up to the consolidation, which made him the natural choice as president," he says.

The need to establish the new company emerged as a result of Ericsson's rapid growth during recent years. Mergers and acquisitions of other companies have created a large administration and some duplication of work. This will now be eliminated. The new company will be established during the first quarter of 2002 with about 26,000 employees.

## No drastic changes

"This is a formal, legal change and, consequently, it will not affect the everyday work routines of most employees. The same employment terms will remain in effect in the foreseeable future. Changing to another company will not be a drastic transition; for example, the total employment tenure within the company is what counts," explains Ulf Berg.

The number of legal companies will be reduced sharply as a result of the change. Companies included in the new company's primary business and core areas of activity will be affected by the change (see fact box).



Ulf Berg has worked within Ericsson for a total of 26 years, including Ericsson Microwave Systems and Saab Ericsson Space. He is looking forward to his new role as head of the new company that will consolidate all operational activities under one roof. "I have experience from similar restructuring work at Ericsson Microwave Systems, although on a smaller scale. I also have comprehensive knowledge about the company in general," he says.

PHOTO: ECKE KÖLLER

## THE NEW COMPANY IN BRIEF

- **President:** Ulf Berg
- **Chairman:** Per-Arne Sandström
- **Number of employees:** 26,000
- **The following 15 companies will be included in the new company:** Ericsson Mobile Communications, Edgecom, Ericsson Software Technology, Ericsson Infotech, Ericsson Erisoft, Ericsson Mobile Data Design, Ericsson Radio Access, Ericsson Radio Systems, Ericsson Telecom, Ericsson Billing Software, Ericsson Compitex, Ericsson Utvecklings AB, Ericsson Internet Applications, Ericsson Softlab, Ericsson Microwave Systems (telecom sector).
- **The following companies based in Sweden will not be included:** Ericsson Enterprise, Ericsson Technology Licensing, Ericsson Network Technologies, Ericsson Business Innovation, Ericsson Mobile Platforms, Ericsson Microelectronics, Ericsson Microwave Systems (defense operations) and Ericsson Sweden.

On March 1, the first subsidiaries will be transferred to the new company, and most other companies will be incorporated by April 1.

The name of the new company will be announced within the next few weeks.

Ulf Berg summarizes what he will be working with during the coming year:

"During the first quarter, I will concentrate mainly

on administrative work that will be required to consolidate the 15 companies. During the rest of the year, my colleagues and I will focus on efforts to create uniform systems, for example in such areas as IT, HR and business systems, among other priorities.

ULRIKA NYBÄCK

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The hunt for the optimal supply chain is fully under way. Tomorrow's business will be characterized by product packaging and direct shipment to site. Local warehouses will close.

Within TTC Global, the platform on which the work will be based has been rolled out and all that remains is fine-tuning of the processes, methods and systems.

## Each link equally important

There are three basic requirements, as expressed by the departing head of the TTC Global Program, Lars-Göran Hansson:

"We must secure our supply chain, improve our cash flow and strengthen our customer contacts."

In order to succeed, internal changes are necessary. Complex and superfluous processes involve extra work and costs. Ericsson's inventory contains materials worth significant sums of money, which has a negative impact on cash flow.

"To secure our position in the market, we will now close our local warehouses," says Lars-Göran Hansson. "Naturally this will help us cut costs but, more importantly, it will help to bring about the changes necessary to get the TTC process up and running."

Considerable effort will also be put into sales and the introduction of product packages – whereby the customer will purchase functions and characteristics and Ericsson will deliver products corresponding to the customer's requirements.

"Product packaging is a condition for being able to standardize and simplify the delivery chain," explains Lars-Göran Hansson. "But packaging our products is not enough. Our key account managers, who are responsible for specific customers, must work actively with sales and involve our customers in the process."

An efficient delivery chain means flexible capacity, short lead times and increased delivery precision. This places substantial demands on cooperation between the various organizations within the company.

"If one link in the chain fails, the whole process becomes blocked and the supply chain becomes inefficient," says Lars-Göran Hansson. "We must clarify our roles and our responsibilities throughout the flow, build up confidence in one another's fields of operation and speak the same language to each other. Only then will we be able to see the results of the process of change in their entirety."

This will be one of the challenges facing Karin Färenmark who will now run TTC Global. The process will enter a new phase during 2002.

"Now that the foundation has been laid, the processes are in place and the necessary tools are available, the time is ripe for us to concentrate on implementing the necessary changes."

Organizationally, TTC Global will now be transferred to the line organizations. The responsibility for realizing the changes lies with the Market Units, Business Units, Core Units and the Flow Control Centers that administratively bind together the complete organization. The corporate function Supply & IT is coordinating the processes and conducting follow-up efforts.

The main focus lies in introducing product packaging, direct shipment to site and methods for the efficient management of software in the supply flow.

"We must not forget that it is the market – our customers' requirements – which pushes TTC Global ahead," says Karin Färenmark.



Karin Färenmark



The departing general for TTC Global, Lars-Göran Hansson makes it clear: "If one link in the chain fails, the entire process is blocked."

Maintaining a world-class product portfolio is not enough. Once a customer has placed an order, Ericsson must be able to deliver to the correct location, at the correct time and at the right price.

The path from ordering to invoicing varies depending on the product, the customers and our location. For those working to change and improve Ericsson's delivery system, the goal is clear - to increase customer satisfaction and minimize costs. Let us provide an example of what the various stages of the flow look like.



- map of Ericsson's supply chain

## 1. Customer

A customer places an order for a base station. The customer configures the product, based on characteristics such as capacity, frequency and sectors. Just as when buying a car, utility is a key factor. In the past, customers were required to compile, in cooperation with Ericsson, long purchase orders, ordering every component separately. This required extensive knowledge from both the seller and the buyer and the compilation of the order could take months.

It was like being forced to order a steering wheel, four wheels, the camshaft, and so forth, by yourself when buying a car.

When the customer instead orders specific characteristics, resources can be saved both by Ericsson and the customer.

If Ericsson wishes to change components in a base station without altering its characteristics, this can be done without having to renegotiate the contract.

For market units, this simplified process means being able to devote more time to nurturing customer relations, thereby improving opportunities to make accurate forecasts regarding customers' short and long-term needs. This kind of information creates opportunities for the subsequent links in the supply chain to prepare themselves for future challenges.

## 2. Order processing

The customer sends its order electronically to one of Ericsson's Flow Control Centers. Here, the customer's specific performance characteristics are translated into actual products. The contents list including items such as cables, screws and cabinets, is produced using a configurator containing Ericsson's product portfolio.

Within 24 hours, an employee at the Flow Control Center has checked that the order can be delivered in accordance with previously agreed conditions, after which, an order confirmation is sent to the customer.

The order is then divided up and sent out to the relevant subcontractors and to a Node Production Center for assembly and testing.

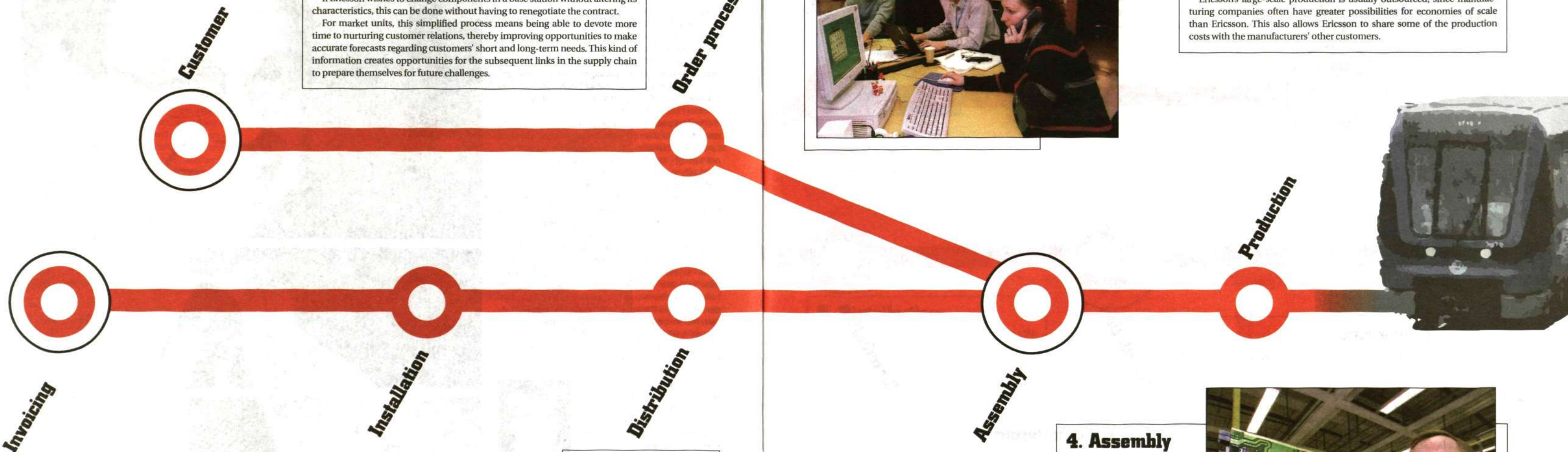
Transportation to the customer is arranged in advance in order to ensure that all equipment arrives simultaneously at the site.



## 3. Production

Subcontractors manufacture modules that are subsequently assembled into finished products at the Node Production Center. Instead of delivering empty cabinets and rolls of cable, the cables are mounted into the cabinets before they are shipped. This facilitates a faster final assembly process. The manufacturer works closely with the Node Production Center, to which deliveries are made up to three times daily. Frequent deliveries reduce the need for local inventories at Ericsson, resulting in lower costs.

Ericsson's large-scale production is usually outsourced, since manufacturing companies often have greater possibilities for economies of scale than Ericsson. This also allows Ericsson to share some of the production costs with the manufacturers' other customers.



## 7. Invoicing

When the installation is complete, the market unit invoices the client. In the past, it was commonplace for an installation to be followed up by several weeks of paperwork, with documents being sent back and forth for approval. By rationalizing the process and sending out invoices electronically a significant amount of time is saved. Time is of the essence when every week of delay costs Ericsson large sums of capital. Simply by following up payment actively for certain customers it has been possible to reduce customer receivables by almost 80 percent in less than one year.

## 6. Installation

Simultaneous delivery to the customer means that installers avoid having to make multiple trips to a site, and in the event of a fault, routines are in place for the delivery of replacement parts. Quality is increased and installation times shortened.

Installation is farmed out to Ericsson-approved subcontractors but finally approved by Ericsson's own employees. By contracting out this work, Ericsson's flexibility in serving customers is increased.

## 5. Distribution

To ensure that parts from various suppliers arrive together, without an intermediate storage facility, Ericsson has brought in four regional and global companies to take care of transportation.

The company saves a significant amount of money by avoiding local inventories, Ericsson avoids having to discard goods that have grown obsolete.

Furthermore, costs for leasing, staffing and equipment are also minimized.

## 4. Assembly

Base stations are assembled at the Node Production Center which, thanks to forecasts, can receive parts from subcontractors in a very short amount of time. The modules assembled are standardized, generating economies of scale while possibilities for combining parts in different ways are extensive and Ericsson can offer a broad product portfolio. All products are tested prior to shipping in order to avoid problems being discovered at the installation site.





— here are the people who do the work

## 1. Customer

**Tiago Pereira** works intensively to ensure that all of his customers in Portugal place orders in the form of product packages. This system is already in place for certain 3G products.

"Successfully implementing major changes requires the involvement of all employees," emphasizes Tiago Pereira.

And that can be difficult when the pace of work is high and there is a steady stream of urgent tasks to be dealt with.

"As a TTC Global Driver, I consider my primary task to be getting everyone to realize that profits can be made using the new approach — both for ourselves and our customers."

He sees no real disadvantages in using product packages. What might initially seem to be a weakness — the fact that customers cannot be entirely flexible in placing their orders — is actually an advantage. Standardized products result in improved deliveries, reduced expenses and less time devoted to problem solving.

Tiago Pereira says that customers appreciate the advantages of product packaging, although during a transitional period they might feel uncertain about what it is they are paying for when they purchase functionality rather than components.

"Seeing the potential and having the opportunity to be involved in implementing change is the most fun part of my job," says Tiago Pereira.

## 2. Order processing

"The most stimulating aspects of working at the Flow Control Center are the international contacts and noticing that through collaboration, it is possible to make things work perfectly."

"That's the biggest reward," says Helena Lundberg, "and we're the hub of the wheel coordinating the entire process."

Consequently, Helena Lundberg and her colleagues need to have a broad understanding of Ericsson. They know the products, know what a site looks like and check to ensure that their forecasts are accurate.

Maintaining strong contacts with customers, staying informed about what is going on and ensuring that these skills are passed on, are what Helena Lundberg views as the most important aspects of her work.

Internal lead times help her coordinate timetables, although sometimes there are problems in the delivery chain. In such situations, Helena Lundberg receives a warning through the track and trace system. "An anticipated leg has not been completed." The fault may be



due to loaders at Bangkok Airport simply forgetting to load Ericsson's crates. She then tries to find an alternative solution.

Even if much of the process occurs automatically and electronically, it is frequently small things that can cause problems. For instance, the key to the attic where a base station is going to be installed might be kept by a woman who lives on the second floor of the building across the street. In such situations, it is Helena Lundberg who knows.

## 3. Production

**Flextronics manufactures** many of the parts that are included in Ericsson's products. In order for Flextronics to achieve the requirements set by Ericsson, it is important to have accurate forecasts.

"Increasing or altering production is really not a problem for us since we are such a large company," says Stefan Lager. "We're able to rapidly bring in more employees and redistribute resources. What can cause problems is the availability of certain materials or product-specific equipment in the event of rapid upswings. In such cases, early information is extra important."

Since Flextronics has plants around the world, it is also easy to localize manufacturing to the site best suited to the circumstances.

In a situation where short lead times are the highest priority, manufacturing should take place as close to the specific market as possible. If, on the other hand, the main priority is to hold down prices, manufacturing should be situated in the country that offers the most favorable economic conditions.



## 7. Invoicing

**Astrid Grohn** and her colleagues in Germany have worked on electronic invoicing without intermediaries for almost a year.

"Initially, we were very enthusiastic," he says. "We thought it was fantastic and talked about how fast and simple it was. Now the process has become routine and you take that efficiency for granted."

If the customer has not made any complaints about an installation within five days, the invoice is sent automatically. In the past, paperwork was sent back and forth for approval. Postal communication alone consumed a great deal of time, and if someone forgot to make a signature somewhere, there would be further delays. Both the customer and Ericsson benefit by this simplified invoicing process.



Astrid Grohn feels that her customers are conscientious, although sometimes payments are late. In those instances, Astrid Grohn usually calls up the client and asks what has happened and if there is anything she can assist them with. This has proved to be a simple and effective approach.

## 6. Installation

**Installation is performed** by subcontractors. Sait Eryilmaz and his colleagues at Ericsson in Turkey maintain contacts with subcontractors and train them. He has spent two years preparing an installation handbook that describes everything that has to be done at a site.

"Everything is standardized and specified. It even specifies the tools needed."

He thinks that subcontracting installation works well.

"Since our subcontractors work in a competitive market, the work gets done quickly and quality is high," he explains.

There are some subcontractors whose sole task it is to find appropriate sites for base stations and secure leases for those sites. Other companies are responsible for the actual installation or running electrical lines.

Sait Eryilmaz and his colleagues monitor the process — how quickly it is proceeding, which contractors are performing best — as well as conducting the final quality checks.

"Of course it's fun to be able to get installations completed as quickly as possible," says Sait Eryilmaz. "Although you can never be completely satisfied. You always have to strive to make things better."

## 5. Distribution

**Transport coordinator** Cecilia Törnberg, at UAE Logistics in Märsta, is able to have a base station collected in Gävle and delivered to any site in the Netherlands within 48 hours. She receives a distribution order from Ericsson at her office outside Stockholm.

"The order specifies the hour that the customer would like their items delivered. Anything within a half-hour of the specified time is okay. Otherwise I have to report it as an aberration. But that seldom happens. Usually we only have problems if there is an accident or if a truck breaks down. In those sorts of situations, customers are rather unforgiving. They want their items and don't care about the nature of the problems we have experienced," says Cecilia Törnberg.

Although Cecilia Törnberg does not really feel a need to know what is contained in the shipments and concentrates on booking trucks and workers and arranging all of the paperwork necessary to transport goods across international borders.

With the help of regularly scheduled pickup times, computerized routines and quite a bit of experience, Cecilia Törnberg finds arranging transports a fairly smooth process.

"Much of what I do is in my head and it's not until I have to explain it to someone else that I think about how complicated it really is," she says.



## 4. Assembly

**Rack assembler** Göte Olsson and his colleagues at the Node Production Center in Gävle, Sweden, always know exactly where the cabinets they are working on will be going.

"I feel fully involved. I like my work very much. I'm what you would call a hands-on person, so this has always been a dream for me," he says.

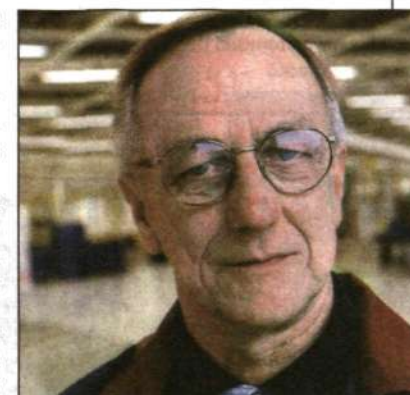
The actual assembly process involves Göte Olsson receiving an order, collecting the parts and connecting everything according to a meticulous plan.

"We follow drawings and also check each other's work, so there should never really be any problems," he says.

Despite the fact that the products being assembled are standardized, it is easy to discern who has assembled a particular cabinet.

"I can tell by looking at a cabinet who has assembled it," he reveals. "We all do things a little bit differently, and it's the small details that vary."

Workloads vary with calm days being followed by hectic ones. It is a pace of work that Göte Olsson has grown accustomed to.



# Nordic rush to 3G

3G is here. In the Nordic region, network construction is advancing rapidly in three of four countries, and Ericsson is largely responsible for rolling out customers' networks.

3G is no longer a matter of visions or dreams. It has arrived and is working today, although on a limited scale.

NOBA, the Nordic and Baltic market unit, is working closely and intensively with operators to make the Nordic region a pioneer in 3G.

"The Nordic countries have been in the technological forefront for a long time. The first 3G agreement ever was signed in Finland and the first contract on a shared network was signed in Sweden. Now we will be among the first when it comes to rolling out the networks," says Ola Elmeland, vice president, Strategic Marketing and Business Development at market unit NOBA.

Today, systems are up and running in Sweden, Norway and Finland. The first 3G calls were made by the end of last year.

Ericsson is supplying infrastructure to six networks: Hi3G and Svenska UMTS Nät in Sweden, Finnish 2G, Sonera and Ålands Mobiltelefon in Finland and to Norwegian operator Telenor.

### Rapid roll out

"We are going full steam ahead. If we take operator Finnish 2G, we have delivered Ericsson's UMTS solution to nine cities, which is more than more than any other vendor has done for any other operator in the country," says Veli-Matti Mattila, president Ericsson Finland.



Veli-Matti Mattila

In Sweden, all four license-holders have started their networks, and PTS, the National Post and Telecom Agency, recently performed measurements to ensure that the networks comply with license requirements.

At present, Ericsson is the supplier of two of the Swedish networks Hi3G and Svenska UMTS Nät, which is jointly owned by operators Telia and Tele2.

The networks will be taken into commercial operation later this year, and the roll out is progressing rapidly.

In less than two years, by December 31, 2003, construction will be complete. At that time, the license holders have promised that virtually every Swede will be able to use 3G.

For Hi3G, Ericsson is responsible for delivery and installation of base stations, the core network and transmission, as well as the operation and maintenance system. In addition, Ericsson is supplying implementation and network planning services.

Thomas Norén, key account manager for Hi3G at the Nordic and Baltic market unit, is in charge of the project.

"The project is progressing well, and Hi3G is a very exciting customer, whose only and total focus is 3G. We are actually slightly ahead of schedule and are now installing base stations in the major cities. Our priority now is to get commercial service started quickly with a wide range of exciting services," says Thomas Norén.



Thomas Norén

The network for Svenska UMTS Nät is also a very large and critical project. Initially, the network consists of a small system in parts of Stockholm. Within a few months, however, the network will provide coverage in the three big cities of Sweden.

"To maintain the status as sole supplier, it is important for Ericsson to live up to its commitments," says Staffan Henriksson, key account manager for Svenska UMTS Nät.



Staffan Henriksson

"This far, progress has exceeded expectations, and we naturally expect that we will be able to live up to the customer's high expectations. Although the sums have not been disclosed, these two contracts are obviously worth several hundred million USD for Ericsson."

### First shared network

Telia and Tele2 were the first two operators in the world to sign a contract for a shared network.

"A shared network makes many demands on the system. The network must allow the operators to compete fully with each other and offer unique services," says Staffan Henriksson.

At the same time, it can also be an advantage that both operators have GSM networks. In many cases, existing sites can be used for base station installations.



The Nordic region is well on its way in the 3G race. Yet another of the base stations that will serve the Swedish 3G network is installed on a roof in Stockholm.

PHOTO: ECKE KÖLLER

Hi3G will be sharing parts of its network with Europlatan/Vodafone. The fourth Swedish operator Orange has not yet decided on cooperation. According to the license regulations, at most 70 percent of the network may be built jointly by the license holders.

To date, only two 3G networks have been taken into commercial operation: Japanese operator DoCoMo's FOMA system and Manx Telecom's network on the Isle of Man. DoCoMo has its own version of the 3GPP specification, however, and on the Isle of Man, there are only a few terminals.

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China became the world's largest mobile market during 2001. Now Ericsson, Motorola and others are investing significant sums in production in China. Seen here: base station production at ENC, a company in Nanjing, jointly owned by Ericsson and Panda Electronics.

PHOTO: LARS ÅSTRÖM



To meet increased demand, the Indian government wants to increase the number of fixed lines from 3. to 7.0 per 100 inhabitants.

PHOTO: ELIN DUNÄS

# China effect puts Asia ahead

It was in the Asia-Pacific region that things really got moving in 2001. A new report shows that, compared to Western Europe, almost twice as many agreements on the delivery of mobile infrastructure were signed here. And it is all due to the "China effect."

Contrary to what one might believe, 2001 was an active year for large-scale telecommunications suppliers around the world. "The top infrastructure vendors have all maintained a strong infrastructure activity, with Nokia and Ericsson leading in terms of number of contracts awarded", writes the research company, EMC, in its 2001 annual World Cellular Review.

EMC affirms that Ericsson succeeded in securing the most valuable agreements overall, while hard hit Lucent secured the single largest contract, the upgrade of Verizon's CDMA network in the US, valued at USD 5 billion.

However, the US is no longer the largest market. At the end of April, China sailed past the US with 106.5 million mobile subscribers compared with 105.9 million subscribers in the US. By the end of the year, China had more than 140 million mobile users.

In fact, almost half of the contracts closed during 2001 in the Asia-Pacific region were attributable to China. Ericsson was also the leader in this field, closely followed by Nokia, Motorola, Siemens and Nortel.

## CDMA on the way

The Chinese market is dominated to 99 percent by GSM. Of the new contracts, however, 20 percent were for CDMA equipment for China Unicom's new Horizon network that was launched on a small scale at the start of 2002.

"Prior to 2002, however, there has been some speculation that the new CDMA contracts will be awarded to Chinese rather than foreign suppliers," comments Michèle Scanlon, research manager at EMC.

Ericsson was not alone in deciding to invest in the Chinese market. Motorola intends to invest USD 6.6 billion there during the next five years. This repre-

sents a tripling of its investments to date. Motorola is also considering moving its regional headquarters from Singapore to Beijing, according to a statement in November by the Chairman of its Board of Directors, Christopher Galvin.

Over the next few years, China will continue to be of great importance to all companies in the mobile market, particularly due to its entry into the WTO and the two new mobile licenses soon to be allocated.

"Other markets to watch closely are the US, where the transition from TDMA is affecting suppliers' agendas, and Brazil," says Michèle Scanlon.

## Must choose which way to go

The battle for TDMA is undeniably interesting. Today's TDMA operators must decide whether they are to move to the next generation of networks via GSM or CDMA.

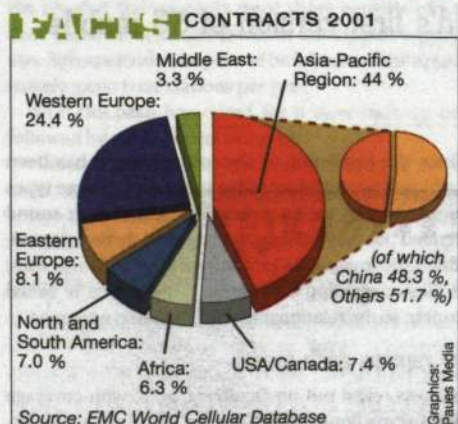
Israel's Cellcom has already chosen GSM. Operator BCP in Brazil is playing carefully by testing both systems. However, most are holding off on making a decision. Telecom suppliers throughout the world will eagerly await their decision during 2002.

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World Cellular Review by EMC is available at:

bic.ericsson.se



The diagram shows the proportion of mobile infrastructure contracts signed in various parts of the world in 2001, but does not account for contract values.

## Faster telecom decisions in India

India is to merge its ministries for IT and telecommunications. The goal is to speed up the decision making process. India's telecommunications sector was opened to competition in the mid 1990s, but growth has been inhibited by differences in views held by private players and the government as to how earnings should be shared and the size of license fees. Nonetheless, capacity has more than doubled during recent years to 3.7 fixed lines per 100 inhabitants. The government wishes to increase the number to 7.0 lines per 100 inhabitants before 2005 by investing USD 25 billion.

## New mobile operators in China emerge

China's government is to rearrange the domestic telecommunications market. Today's two mobile operators, China Mobile and China Unicom will face competition from China Telecom and China Netcom. At the same time, the two established mobile operators are to begin selling fixed network traffic. China will thus have four network independent operators selling voice and data traffic.

## Nokia achieves its fourth quarter targets

Nokia of Finland expects to achieve or even exceed its targets for the fourth quarter. Sales are expected to increase by 20 percent compared with the third quarter but to decrease by the same amount compared with the year-earlier period. Growth will be highest for North and South America, as well as Europe, Nokia says. The figures are to be published on January 24.

## Patricia Russo takes over at Lucent

Lucent Technologies has appointed a new president and CEO, Patricia Russo. She has more than 20 years of experience in leading positions at Lucent and AT&T. She comes to Lucent from the Eastman Kodak Company, where she was president and COO.



Patricia Russo

"Pat has all the knowledge and skills Lucent needs right now," says the former president, Henry Schacht, who will now become chairman.



"Foma is here, come and try it, see a picture of yourself!" The hard sell of NTT DoCoMo's 3G service Foma is now fully under way in Tokyo. This is taking place at the same corner in Shibuya, where i-Mode was sold in 2001. Three million people pass by this corner each day.



Most dealers have not yet managed to add the Foma phones to their offerings, but the range is nevertheless extensive. These are only DoCoMo's phones.



"Look, that's you!" Joachim Brolin and Nobuo Ogaku test visual calls over the 3G network. The background is Akihabara, the city district that is a test market for all Japanese electronics.

# Foma promotes use of 3G

In 2001, it was i-Mode. This year, DoCoMo's advertising ladies are at the same busy location outside the Shibuya subway station in Tokyo, shouting out the message: "Foma is here! Come and try it, come and see your picture on a mobile phone!"

Foma is the brand name for the world's first version of 3G mobile telephony.

**Foma stands for** Freedom of Mobile multimedia Access and is being launched by Japan's formerly state-owned telecom company, which has already scored a success with the i-Mode packet data service. Foma is largely based on i-Mode, which has already opened up many more possibilities than GPRS and wap have achieved in Europe to date. The additional feature of Foma is the possibility to make visual calls, so far at the speed of 64 kilobits per second and preferably at close range and standing still. It is also possible to speak and transmit packet data at the same time.

Since the beginning of December 2001, it has been possible to transmit short video sequences of three types using streaming media technology: video with sound (intended for advertising, trailers and news), sound-enabled still images, for example, of famous film scenes, and files containing only audio. The service is called i-Motion, so the relationship with i-Mode is apparent.

**New regions each month**  
Foma was rolled out on October 1, 2001, with coverage inside Tokyo's Route 16 beltway, but it is already acceler-

ating at high speed on its way out into the Greater Tokyo area. At the end of each month, new regions are incorporated into the coverage area, and in the fall of 2001, it was Ericsson's turn to bring into use its first two base stations a short distance outside Tokyo's center.

NTT is not renowned for carelessness with its technical equipment, so it took two months of thorough testing before Ericsson's base stations were approved and could be taken into commercial operation.

This was a minor historical event, since it marked the premiere for Ericsson's 3G equipment in live commercial operation. The 400 Ericsson employees in a number of different countries who had been involved in fine-tuning the details could at last breathe a sigh of relief.

Contact visited Akihabara, the district that is known as Electric City and is a test market for all electronic products manufactured in Japan. Joachim Brolin, on loan to NTT from Ericsson Microwave Systems to manage the work on DoCoMo's 3G base stations, and Nobuo Ogaku, market manager for Ericsson's 3G base stations in Japan, are here to demonstrate how to make visual 3G calls.

And it certainly does work. Maybe not with razor-

sharp images and perfect color reproduction, but it is at least possible to see who is speaking.

However, a purely esthetic objection arises immediately. The camera eye is located in the joint between the upper part of the phone - the part that is folded upwards and contains the display - and the lower part that functions as a keyboard.

The natural way of holding the phone when looking at the display is just below the face. Women, at least, understand that this gives them double chins in the image - even those who don't have any to start with.

**Nearly a third of the pie**

Sven Eriksson, Ericsson's key account manager for the NTT DoCoMo, is not worried about double chins. He is pleased that the first base stations are in operation.

"We have made a start," he says. "But this doesn't mean that we are satisfied with a quarter of the pie. We believe that we can capture 30 percent of the market."

This is not a figure plucked out of thin air. DoCoMo has indicated that Ericsson has succeeded well in terms of quality, according to the stringent evaluations conducted continuously by the operator.

"And the weak Swedish currency works in our favor," Sven Eriksson states. "We can offer both high quality and low price. This should be a sales argument that is difficult to beat."

The other suppliers of 3G base stations are NEC, Fujitsu and Panasonic. During the first six months of 2002, the pie that the suppliers must share consists of 2,000 base stations, of which Ericsson anticipates supplying 650. Subsequently, the pace of build-out will be approximately 3,000 base stations per year.

NTT DoCoMo has opted for a slow start-up to be followed by a substantial ramp-up.

"We anticipate having 150,000 customers in the network in March 2002 and six million users in March 2004," says Takumi Suzuki from DoCoMo's corporate communications department.

**Used by people in the career**

To date, it is primarily the early adopters who are using Foma. During a week in Tokyo, Contact saw about ten Foma terminals in use. These were mainly visible at airports and were being used by career people.

There are three phones to choose from: one called the standard model that can operate on 384 kilobits per second, one that is called visual type and has a larger display and a camera eye, and a terminal that more resembles a hand-held.

The price of the phones varies according to the type of subscription and there are a multitude of these. Roughly, however, a phone costs JPY 60,000, or approximately USD 455. This is not much money for a Japanese with a normal income, and DoCoMo sees no reason to target any specific group.

Foma can become as broad a service as i-Mode," says Takumi Suzuki. "We foresee no limits."

In order to put this statement into a market perspective, we can repeat some facts from i-Mode's history: The service was launched in February 1999 and now has 29 million users. The total number of mobile users in Japan is 46 million, with a population of 125 million.

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# Incremental testing sets new records

Thanks to new work methods using small groups, Ericsson was able to ship the new R9.0 system software for GSM in record time. Above all, the time required for testing was cut in half.

The GSM system continues to evolve with a steady release of new versions, each with new features. Following the major R8 release for GPRS, the focus switched to R9, which to gain time was divided into two releases. R9.0 is focused on positioning and handover between GSM and UMTS, meaning 2G and 3G, while R9.1 includes support for EDGE, AMR (adaptive multi-rate speech coding), GSM for 800 MHz and the next-generation AXE810 switching system.

"We completed R9.0 on time with greater quality and in a shorter time than ever before," says project manager Mårten Pehrson. "This was primarily due to new work methods that proved amazingly effective. We knew when we started, however, that the project deadlines could not be met, if we continued to work as previously."



Mårten Pehrson

The radio network for GSM consists of four nodes: the Base Station Controller (BSC), which is based on AXE, Radio Base Stations (RBS), the Operation Support System (OSS) and the Mobile Positioning Center (MPC). The new work model therefore divided the project up into a number of small feature teams with a representative for each node and several from testing. Each feature team was responsible for a given feature, such as GSM/UMTS handover, all the way out to the customer and worked with the network across all nodes.

## Avoiding a mountain of tests

"We ensured close collaboration between system design and testing by appointing an overall manager for each feature," says system project manager Linda Abrahamsson.

The same people who are responsible for design follow up their work in testing. Because design work for each feature quickly generates testable system components, it was also possible to begin testing at an early stage. Any faults were also found much earlier than was otherwise the case. The result was that the mountain of tests that typically requires six months or more and delays the final stages of a project was avoided. With the new work methods, two to three months are sufficient.

"While we spend more money on implementation, we save enormous sums in testing and have better control over the project," says assistant project manager Ralph Magnusson. "In addition, this encourages new initiatives, since questions do not have to be escalated in the project organization, but can be coordinated between the groups."

Speed is the key in today's market. A project such as R9 is very large and involves people from design centers all over the world.

Ericsson has two FOA (First Office Application) customers for R9.0. These are Germany's D2 Vodafone (formerly MannesmannMobilfunk) and Cingular West in the US. Roll-out of the R9.0 software took place over the network and was completed significantly faster than previously. Project deadlines were met, and D2 Vodafone was able to upgrade its entire network in just over one month.

## High quality standards

This was possible because the hardware and software meets high quality standards, meaning that engineers could confidently upgrade several base stations in parallel. This is proof that the software for AXE and the base stations is of very high quality.

The roll-out of a new GSM version takes place over the network at night when traffic loads are lightest and several hours are available for the operation. Previously, the roll out required site visits, as well as having several trouble shooters on call, in case something went wrong.

Today, everything takes place remotely from the O&M (Operation and Maintenance) centers. For D2 Vodafone, Ericsson had eight groups with two engineers each that upgraded four BSCs in parallel each night.

Like all AXE nodes, each BSC has two processors to ensure continuous operation. In upgrading to a new version, one of the processors is stopped while the software is downloaded. It then transfers the new information to the other processor.

"This is the most critical step. If it is done too quickly, faults can be introduced in the network," says Mårten Pehrson.

A fast roll out, however, is crucial, since the entire change-over procedure costs money for the operator, who also cannot use the new features until the entire network has been upgraded. For Ericsson, speed means faster payment.

LARS CEDERQUIST

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## Operators confirm amplifier effectiveness

TMA, tower-mounted amplifiers, are mounted on radio masts to strengthen the incoming signals from mobile phones. With TMA, speech quality is improved, while the number of dropped calls is reduced. Ericsson estimates that network traffic can be increased by about 5 percent in this manner. Now customers have measured traffic in their own networks and confirmed that these estimates are correct.



Frank Lin from TAT, which conducted the tests and ran the evaluation.

TAT (Trans Asia Telecom) in Taiwan states in its "Test Report of TMA in a GSM 900 Network" issued in October that the average call duration increased by 6.6 percent in rural areas and 5.7 percent in the suburbs. Since it is difficult to measure signal strength from mobiles directly, the operator selected several cells with known problems due to low signal strength and gathered statistics on the differences when TMA was installed. It was shown that dropped calls due to weak signals were reduced by as much as 34 percent in rural areas. The German operator Mannesmann Mobilfunk was able to note up to 50-percent reductions in certain cases.

## Order from chaos may replace silicon

The price for a new plant for integrated circuit manufacturing doubles every three years, according to Moore's second law. Alternatives to today's silicon technology will therefore be needed. Molecular switches, quantum processors and DNA computers have been proposed. The US chemist James Tour is now building a prototype of a molecular memory that uses customized molecules. Instead of designing the circuits in detail, however, he is letting them design themselves from total disorder in somewhat the same manner as scientists believe that the human brain develops. Gordon Moore at Intel, however, continues to have faith in silicon.

This is at least what the Swedish popular science magazine *Forskning och Framsteg* reports.

[www.fof.se](http://www.fof.se)

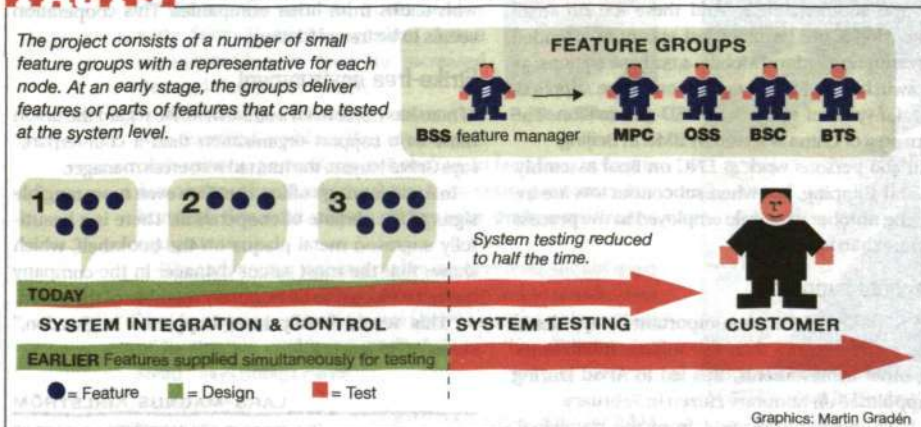
## AXE for 3G now available

The new and compact next-generation AXE810 switching system is entering production (initially in low volumes) so that it may now be ordered by customers. AXE is the platform for several Ericsson products, including switches, mobile switches, base station controllers and Home Location Registers (HLR) for both fixed networks and GSM, WCDMA and CDMA mobile systems.

AXE810 supports ATM and packet data and opens the door to 3G for AXE systems. An 810 station is also very compact, delivering higher capacity in just one third of the space.

It is based almost entirely on commercially available standard products and is designed for fast and easy implementation. With its generic magazine (GEM), which can be configured according to the desired application, size and cabling are dramatically reduced, which also contributes to shorter lead times. The goal is that it should not take more than three weeks from order to delivery. AXE810 will also ensure higher quality in the network.

## ORGANIZATION FOR PRODUCT DEVELOPMENT





Since a new law was passed four years ago, nearly all systems equipment for the Chinese market has been produced within the borders of China. Ericsson's plants are now among the company's largest subsidiaries. The picture shows the final stages in the assembly of a radio base station at BMC in Beijing. PHOTO: LARS ASTRÖM

# Nanjing – largest in the world

Three years ago, the authorities in China decided that what is sold in the country should be manufactured in the country. This signaled the start of unparalleled growth for Ericsson plants in China.

In 1998, Nanjing Ericsson Panda Communications (ENC), in Nanjing, China, had sales of around USD 100 million. A year later, this figure was USD 800 million and last year, the sum had nearly doubled – growth of between 10 to 15-fold in only three years.

"ENC represents about 7 percent of Ericsson's entire sales, so we are probably Ericsson's largest subsidiary today," says Arvid Jauring, the company's president.



Arvid Jauring

ENC is one of three Ericsson manufacturing companies in China, all of which are jointly owned with Chinese companies. The other two companies are EPC in Nanjing, which produces phones, and BMC in Beijing, which makes both systems equipment and phones.

It was three years ago that the conditions for operations were changed. Until then, the plants in China had enjoyed a rather calm existence, but a government decision in 1998 declared that all contracts had to be written using the Chinese currency, RMB. In addition, new requirements meant that equipment corresponding to half of the total value had to be

manufactured within the borders of China. As a result, Ericsson was obliged to rapidly increase its capacity and link up with subcontractors in China, such as Flextronics and Elcotech.

Today, the majority of systems equipment for the Chinese market is produced in Nanjing. ENC manufactures mobile switches for all of China and base stations for the central and southern areas. And these are no small amounts. Under the terms of last autumn's extended contract with Guangdong Mobile, 4,132 base stations, as well as switches and GPRS equipment, were supplied, with a total value of more than USD 500 million. The northern area of China is served by BMC in Beijing.

About 400 persons work at ENC on final assembly, testing and shipping, but when subcontractors are included, the number of people employed in the process totals more than 10,000.

### Government support

Today, ENC is one of the most important companies in Nanjing, a city of more than five million inhabitants. Among other achievements, this led to Arvid Jauring being appointed an honorary citizen in February.

"We have incredible support from the municipal,

provincial and central governments. One of the contributory factors is that our part-owner Panda has favorable contacts," says Arvid Jauring.

The company also has excellent cooperation with the union organization at the plant. Liu Shang Ke has been elected for a third term as chairman of the local union.

"My task is to ensure that my members work well so that the company can fulfill its goals, and also to convey the members opinions to the management and mediate in disputes," he says.

The union is also responsible for leisure activities, such as swimming contests and a football tournament with teams from other companies. This cooperation seems to be free of friction.

### Strike-free environment

"There has never been a strike here. We regard the union more as a support organization than a counterpart," says Grace Huyan, the human resources manager.

In Arvid Jauring's office, there are even more tangible signs of the climate of cooperation. There is a beautifully engraved metal plaque on the bookshelf, which shows that the most senior manager in the company has been elected as an honorary member of the union.

"This would hardly have happened in Sweden," states Arvid Jauring.

# First built-in antenna mobile is Chinese

The latest Ericsson phone models with their built-in antennas have been a sales success, but the first Ericsson phone of this type was actually produced at the Nanjing plant.

**Ericsson's company** for the manufacture of phones in Nanjing, EPC, has expanded its operations substantially in only a few years – from 300,000 phones in 1999 to 3.5 million last year. Like the systems equipment company, ENC, the company is owned jointly with the Chinese company Panda, one of the country's largest electronics manufacturers.

Proprietary models are also developed at the plant and the fact is that it was EPC in China that created the first Ericsson phone with a built-in antenna.

It is the A2638 and was launched during the first half of 2001 – that is, several months before the T65 and T68.

"The model is based on Ericsson's A2618 phone and is the result of collaboration with another of Panda's partners in Nanjing, Intenna. We did this in order to have a model that we thought would better suit the Chinese market," says Arvid Jauring, who is president twice over, for EPC and ENC. A few hundred thousand phones of this model have been sold.

Inside the plant, assembly staff sits in rows and move the phones between them. At every stage, the phone becomes more complete. Unlike the plants in Sweden, for example, the manufacturing process in Nanjing is nearly all manual.

"I like this working environment. We alternate between different

parts of the process, so it never becomes monotonous. I also hope to have the opportunity to advance in my work," says Xu Dong Qiang, one of the approximately 700 employees.



Xu Dong Qiang

"We smiled at poor Japanese quality once upon a time, but not anymore. The same applies to Chinese quality – today, it is at least as good as elsewhere," says Jan Szaruk, production manager.

In addition to the Ericsson models, phones are also assembled for Panda, which, in practice, is also an Ericsson competitor. Even a couple of Panda's models are actually Ericsson phones that have the Panda name on them.

About 60 percent of the output from EPC is exported. As in other countries, market share in China has declined in recent years.

Now the company is working at full speed to start mass production of the latest models, including the T68 and T66 in cooperation with Sony Ericsson.

"I believe that the new models will give our phones new life in China," says Arvid Jauring.



The A2638 was the first Ericsson phone with a built-in antenna. This model was adopted from the A2618 and developed in China to meet demand there. Other phones have followed, such as Ericsson's smallest phone, the T66, pictured on the left. Both models are manufactured at the Nanjing plant.

LARS-MAGNUS KIHLSSTRÖM

## Close cooperation easy in Beijing

**In Beijing, everything is ready** for the cooperation with Sony – the mobile-phone production plants are located side-by-side. Ericsson's other unit for the manufacture of phones and systems equipment, Beijing Ericsson Mobile Communications (BMC) is located in Beijing.

There is also an R&D unit for the local adaptation of software, radio base station production, one of China's two Flow Control Centres, plus a swap facility for systems equipment.

In addition, Beijing is home to China's most advanced repair center for Ericsson mobile phones.

"Last year, more than 4 million phones were produced at BMC, but there is capacity to manufacture more than 15 million," says Robert Parris, president of BMC.

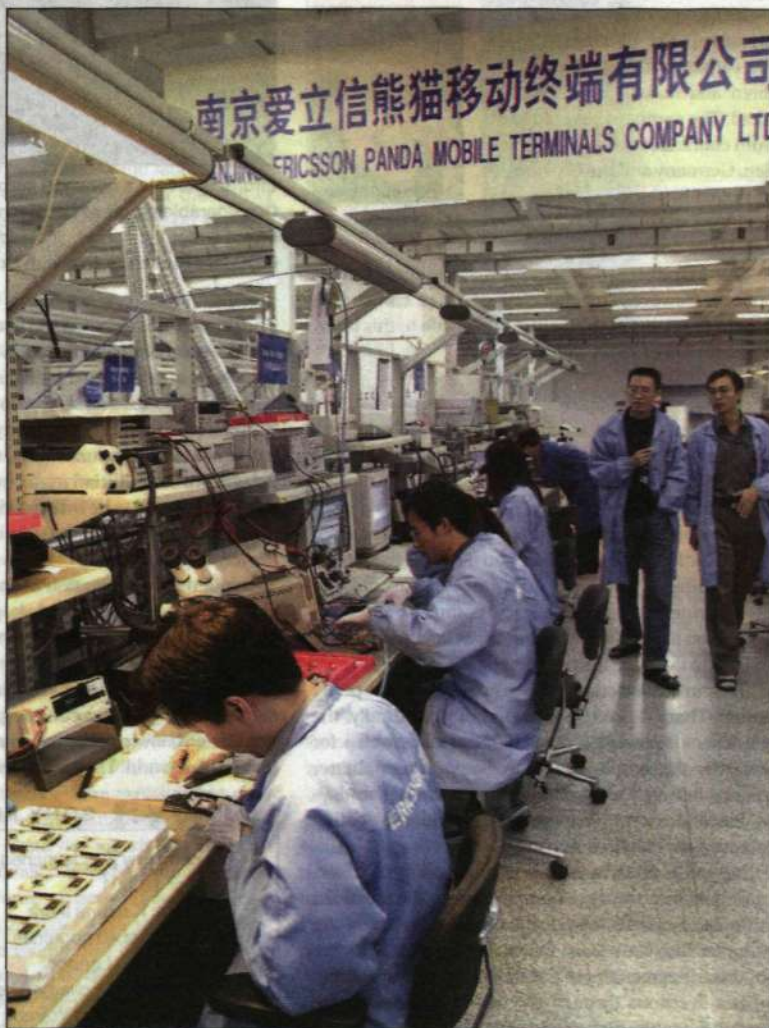
"We are also involved in discussions with Sony Ericsson regarding future expansion plans to meet the increased demand that is anticipated."

With regard to Ericsson's cooperation with Sony one could say that the location of the plant is particularly well chosen. In fact, Sony's plant is just on the other side of the fence. It currently produces a few hundred thousand phones along with professional video equipment.

"One advantage is that it makes it easier if we should need to expand even more. We previously had plans to acquire new land for expansion, but because Sony has only developed half of its site, we could potentially build in that direction instead," says Robert Parris.



Robert Parris



At EPC's plant in Nanjing, 3.5 million phones are produced, 60 percent of which are exported.

LARS-MAGNUS KIHLSSTRÖM

# Advent of a new

On October 1, 2001, Sony Ericsson launched its operations. Efforts to blend the two corporate cultures into one began at the same time. Using questionnaires, seminars and an action plan, the company has made considerable progress.

Malin Boulwood, who is in charge of the integration process, believes it is important to acknowledge and exploit the diversity that exists within the company.

Corporate culture: Microsoft is known for it, so is Swedish-based Ikea. At its best, corporate culture is the glue that holds a company together, and forms the basis of the company's success. If the employees are motivated and form dynamic team, it will show in the accounts.

The task of creating a corporate culture in the newly formed Sony Ericsson began on October 1. Considerable progress has been made, but building a corporate culture takes time, according to Malin Boulwood, who is responsible for the integration of expertise and culture.

"It's important that we don't simply sweep the differences under the carpet, but that we recognize them and make use of them instead. The company's employees – from countries such as Japan, Sweden, Germany and the US – are not all driven by the same things, and managers must be aware of this," says Malin Boulwood.



Malin Boulwood

"Some type of corporate culture is always going to be present. However, management and staff can choose whether or not to take an active approach to this issue. We have chosen to do so," she adds.

## Defining corporate culture

Last summer, several future employees of Sony Ericsson began to develop an integration plan for the two companies.

The first step in the integration process was a web-based questionnaire for employees, which included such questions as: How would you describe the corporate cultures of Sony and Ericsson? What would you like to bring with you to the new company, and what would you like to leave behind? What keywords would you use to describe the new company?

"To our satisfaction, the responses were pretty similar. That's a positive starting-point. Naturally, the questionnaire revealed some differences as well – for example, the employees from Sony wanted better balance between work and leisure time. The employees from Ericsson were more satisfied with the existing balance," says Malin Boulwood.

The chain of command is another point of difference between the two companies. At Ericsson, for example, decisions are usually discussed both before and after they have been taken. At Sony, the manager obtains the agreement of the staff prior to the meeting, pushes decisions through the meeting, and they are not subsequently discussed.

Another feature of the integration activities has been the seminars on the importance of a common culture.



Efforts to create a common corporate culture at Sony Ericsson have now been under way for a few months. Considerable progress has been made, but building a corporate culture takes time. Differences must not be swept under the carpet. Instead, management must take advantage of them. The photo shows Ericsson President Kurt Hellström with Nobuyuki Idei, president and chairman of Sony. PHOTO: ROLF ADLERCREUTZ

The seminars have been held in all cities in which Sony and Ericsson have operations. When the questionnaire responses were compiled and analyzed, management convened and reached a decision on a number of cultural values. Briefly, the company wants the employees to work toward a common goal, to develop team spirit, be able to take initiative, to be dedicated, to fulfill agreements, and to be interested in new products.

## Demanding goals

To avoid misinterpretation of the concepts, managers and staff are assigned workshops to review the concepts, their meaning, and ways of integrating them with the operations.

The Sony Ericsson management believes a key factor in bridging the culture gap is the sharing and transfer of knowledge between employees in different parts of the world. They consider it important that, for

example, Tokyo-based employees spend some time working in Lund, in southern Sweden, or at Research Triangle Park, in the US. Malin Boulwood is looking forward to working in the new organization.

"I'm pleased that we have set ourselves demanding goals and dared to stick our necks out. After all, it is our overall goal to be world-leader in multimedia consumer products. There is a clarity within the organization that I feel employees appreciate.

"We must forge a new identity for ourselves, which will take time. It is important that the employees feel they are involved in our efforts. I think we're on the right track," concludes Malin Boulwood.

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## FACTS SONY ERICSSON

- The company was launched on October 1, 2001
- President: Katsumi Ihara
- Operations in 40 countries
- Head Office in London
- Vice President in charge of sales and marketing: Jan Wäreby
- Number of employees: 3,500
- Develops multimedia consumer products
- Business goal: to be the world-leader in this field
- First products reach the market in second half of 2002
- Product development in Lund, Stockholm/Kista, Raleigh, Basingstoke, Tokyo and Munich
- Ownership distribution: Ericsson 50 per cent Sony 50 per cent

# culture

## Sony Ericsson on right track

Two months after Sony Ericsson officially launched operations, company President Katsumi Ihara says:

"We have received highly promising support from operators and customers. But this does not mean we can afford to relax."

Katsumi Ihara is looking ahead: he talks about product development, quality, the brand name and how new services will influence the development of mobile phones and other terminals.

**Sony Ericsson's President** Katsumi Ihara has met with major operators around the world to explain the company's business concept and strategy. He has also listened to what the customers have to say and can again confirm that most operators expect that Sony Ericsson will deliver unique products that combine the core expertise of both parent companies. Although all operators appreciate these strengths, they still believe that the design of the products needs to be improved if Sony Ericsson is to be successful.

Global operators have a multitude of different demands regarding design, technology, applications and brands, according to Katsumi Ihara. Sony Ericsson must therefore coordinate its marketing and business units to meet these demands and prioritize its resources.

It takes time to develop new telephones and the accompanying applications, a matter that affects both manufacturers and operators. Considering the popu-

larity of SMS and the growth of MMS, it is increasingly essential to deal with these issues.

"We must further strengthen our contacts with operators, so that we can share our vision of product development at an early stage. In this way we can identify and exploit actual growth potential," says Katsumi Ihara.

"With the Japanese market in mind, Japan's second largest operator, KDDI, announced the launch of the first Sony Ericsson phone, the C1002S, at the end of December. This phone is the Sony Ericsson product that was the most heavily promoted during the Christmas season.

"I think the design of the phone is extremely elegant, and it received strong support from KDDI."

On the GSM front, the Ericsson T68 sold so well that the delivery chain had to be reevaluated to meet the demand. A key advantage of the T68 is that it has a color display.

Katsumi Ihara also believes that end-users are more interested in what they might be able to do with the new technology and new applications than in the technology in itself. Most users do not understand technical terms like GPRS and UMTS, but simply want to know what type of services they can access – in other words, how much fun they will have once they buy their telephone.

"To date, the campaign to develop applications and content has been missing from the development process. However, as demand for total solutions that integrate applications and content grows, we must focus more on these efforts."

Regarding quality, Katsumi Ihara explains that poor quality quickly demolishes the customer's confidence – so carefully cultivated – and has an adverse effect on the entire Company's quality. Both Sony and Ericsson have experienced the consequences of poor quality.

"It is something that must not recur with Sony Ericsson. As the software in the phones becomes increasingly sophisticated, and the development phases shorter, it becomes more difficult to maintain quality. Still, let me stress, good quality is extremely important for success."

"It is important that the company's brand name be



Sony Ericsson's C1002S phone.



Katsumi Ihara wants to strengthen contacts with operators and thereby find a shared vision of product development. PHOTO: ANNA SCHORI

favorably perceived, and we've achieved that with the new Sony Ericsson logo," Katsumi Ihara believes. When asked what ad agency is behind the logo, he proudly replies "We did it ourselves."

The Sony Ericsson logo speaks for itself: the symbol is three-dimensional, designed to work on websites and in mobility products.

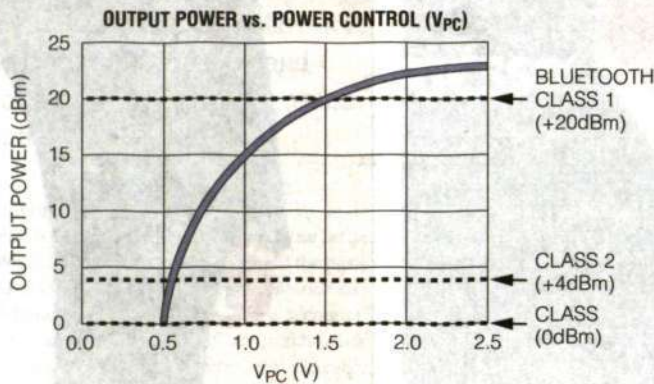
"We're on the right track. The job now is for us all to pull together to make Sony Ericsson world-leading in mobile multimedia products," says Katsumi Ihara.

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# WORLD'S FIRST BLUETOOTH PA WITH INTEGRATED CLOSED-LOOP POWER CONTROL

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|---------|-------------------------|---------------------|---------------------|---------------------------|
| MAX2244 | +22                     | 179                 | Yes                 | 0.5 to 2.0, Analog        |
| MAX2240 | +19                     | 105                 | No                  | 2 Bit, Digital            |
| MAX2245 | +22                     | 179                 | Yes                 | 1.0 to 2.5, Analog        |
| MAX2246 | +20                     | 120                 | Yes                 | 0.5 to 2.0, Analog        |

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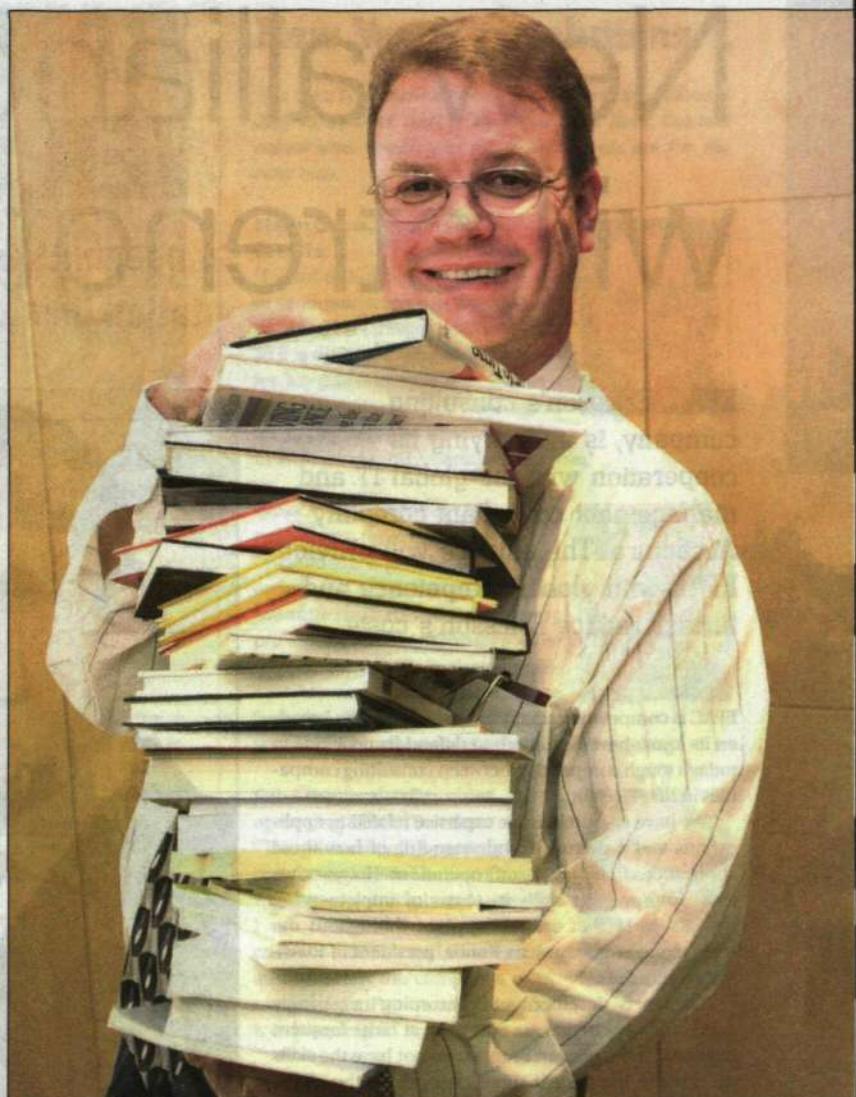




Best place  
to work  
in

Ericsson's Public Systems (EAS) was one of the best places to work in 2001, according to an evaluation conducted by the San Diego Union-Tribune.

Ericsson University is gathering all internal learning opportunities under one umbrella. The first global management team meeting was held recently to start shaping the organization. The idea is to mirror Ericsson's corporate organization, become more efficient, and make it easier for employees to improve their competencies.



Peter Dicksson, head of Ericsson University in North America, prepares for global development.

PHOTO: ECKE KÖLLER

# Ericsson University takes a global approach

With a base in Stockholm, Ericsson University has a number of "virtual" regions. Carola du Rietz, project manager for globalization efforts, says the easiest way to think of the new organization is "one point of entry."

Carola du Rietz explains how it used to work for Ericsson employees needing a course.

"There was a big black hole," she says.

"If you needed sales training, you needed to know which organization offered it and then you had to know the intranet address to register. When we've completed the globalization project, the university.ericsson.se site will host all available offerings."

"This is a very important initiative for Ericsson's future," says Peter Dicksson, manager of Ericsson University's North American region.

"Globalization will allow us to be more coherent in terms of availability and delivery of learning opportunities."

Peter Dicksson says education has been used in the past by managers as a reward for employees.

While that's not wrong, Peter Dicksson modifies the approach.

"We want to concentrate on target-oriented education based on defined needs in the company. I have a steering committee consisting of important representatives from core North American entities who tell me what result they want from education in the company."

Peter Dicksson's immediate goal is to unite fragmented training and education programs in North America.

Carola du Rietz says globalization will result in an Ericsson University that has a uniform look and feel on the Web, in presentation material and student kits.

Global programs will be managed centrally and delivered locally, such as the Ericsson leadership core curriculum. Peter Dicksson stresses the importance of local input.

"It would be a grave mistake to believe that we can provide learning opportunities that look exactly the same. They have to be adjusted for local needs."

As Ericsson University becomes the one "point of entry" for internal education, external education and training remains an important business tool, managed still by Ericsson Education or other organizations, like China Academy.

Joyce Ma, head of China Academy and manager of Ericsson University Region China, believes the globalization effort is sensible.

"Ericsson University sets its mission as a knowledge pool for the company. Shared knowledge creates more value and will enrich the knowledge itself," she adds.

Joyce Ma's goals include integrating parts of her organization into Ericsson University, while maintaining Ericsson China Academy as an active source of training for external customers and other stakeholders.

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# New alliance will strengthen EPAC

EPAC, Ericsson's consulting company, is intensifying its cooperation with the global IT and management consultant company Accenture. The alliance will provide EPAC with global competence and further reduce Ericsson's costs.

EPAC is competent in many areas, but needs to broaden its know-how even more to defend its positions in today's tough competition between consulting companies in the IT-sector.

"We have comprehensive expertise related to applications and a thorough understanding of how these applications fit into Ericsson's operations. However, we must improve our skills in terms of implementing changes in IT that are taking place throughout the entire company," says Jens Knobe, president of EPAC, and continues:

"The rate of development is becoming increasingly rapid, and new trends are emerging at more frequent intervals. At the present time, we do not have the skills we need to implement these changes on the global plane."

### Global partner

Training EPAC's own personnel in every new applications trend is not a viable alternative, since it would be expensive and far too time consuming.

"The formation of an internal consulting organization that is too large and comprehensive cannot be defended financially. This is why it is important to find effective partners in various areas," says Jens Knobe.

To resolve the situation EPAC's management decided to seek the assistance of a cooperation partner with global business activities. Its choice was Accenture, an American consulting company. Working together, the two companies will concentrate not only on the introduction of applications, but also various forms of processing.

Effective January 1, 2002, EPAC and Accenture entered an alliance agreement that will remain effect until further notice.

"Accenture's strength lies in its international business expertise in the aforementioned areas. It also has comprehensive experience from working with Ericsson in the past, and the ability to make personnel available in all locations where Ericsson conducts business activities," says Jens Knobe.

### Not a joint venture

He emphasizes, however, that it's not a matter of creating a joint venture.

"In a joint venture, both partners share the risks and eventual profits. Through this alliance, we want to make sure the business values of our major implementation undertakings will benefit Ericsson and, in parallel, that relevant knowledge is transferred to our employees. Both partners will gain greater market share and, in turn, increased responsibility and control over the assignments we handle."

The alliance has the full support of Ericsson's



EPAC, Ericsson's consulting company, has entered an alliance agreement with Accenture, an IT and management consulting firm. According to Jens Knobe, president of EPAC, and Jörgen Lenz of Accenture, the alliance will provide both companies with greater control over the assignments they are contracted to manage and reduce Ericsson's total consulting costs.

PHOTO: ECKE KÜLLER

### ABOUT EPAC

Ericsson Process & Application Consulting, EPAC, is the corporation's own consulting company; it has 1,400 employees. EPAC was started when several different types of consulting operations within Ericsson were brought together and divided between EPAC and Ericsson Global IT Services, EGIS. The activities of EPAC, which were started toward year-end 2000, compete with external consultants for Ericsson contracts in all parts of the world.

### ABOUT ACCENTURE

Accenture is an American consulting company with more than 70,000 employees in all parts of the world, working in more than 200 offices. Accenture specializes in contracting, strategies, investments and leadership within both IS and IT. Ericsson has contracted Accenture in the past for cost reduction programs in Mobile Systems and other areas of activity.

IT-management. Håkan Liedman, vice president of Corporate IT, understands, however, that the alliance may be perceived to be in conflict with Ericsson's goal to minimize the number of consultant contracts within the corporation.

"In actual fact, this alliance will reduce both the number of consulting companies we use and total consultant costs within our IT-activities. We have several hundred consulting companies working today in our

activities within Ericsson. We will now eliminate between 200 and 300 of these consultants and replace them with one extremely competent primary supplier, and, I hasten to add, at a lower total cost for Ericsson," says Håkan Liedman.

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## Best place to work in San Diego

Ericsson's Mobile Systems CDMA unit is one of the best places to work in San Diego, according to an evaluation conducted by the San Diego Work Force Partnership. The agency, which is a labor-market information organ supported by the city, conducted its evaluation in cooperation with the San Diego Business Journal.

The evaluation includes such areas as the training and bonus system that companies offer their employees. Other factors evaluated are the diversity of the workforce, empowerment and what methods are used to measure employee satisfaction.

"This award is in part the result of Dialog, which we use as a measurement instrument. There are special scales for measuring how satisfied employees are with working conditions and whether or not they feel they can influence conditions," says Tony Chartrand, vice president in charge of personnel.

One prominent example is the unit's job satisfaction index, which increased by 585 last year to 647. The average for the whole of Ericsson is 591.



Employees from the personnel department at Ericsson Mobile Systems CDMA were on hand to receive the award as "One of San Diego's best workplaces." PHOTO: MICHELLE GEREVAS

"In these challenging times, it is very gratifying to be recognized as one of the best places to work in San Diego," concludes Tony Chartrand.

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## New Years' resolutions...

The New Year means a fresh start for many and resolutions at work and in their personal lives. Contact asked some employees what their goals are for the New Year.

**Marin Guina, systems expert, Croatia:**



"I want to finish by master's degree in economic science at the university in Zagreb. I travel a lot in my work, so it is difficult to find time for studies. My goal is to try to put together a schedule that will work. I also like to travel privately and hike in the Alps in Switzerland and Austria, for example."

**Elina Ahlberg, Global LMS consultant, Sweden:**



"I would like to get a better structure on my work hours so that I work less overtime and have more time for my private life. I would like to take some courses for my professional development and just become more focussed. In my personal life, my goal is to get really really good at horseback riding."

**Per-Arne Sandström, chief operating officer, Sweden:**



"The year 2002 will be an interesting one during which I believe Ericsson will show its strength and potential. I will continue working to reduce costs for research and development and to review the company's product portfolio. A personal resolution is to lose weight."

## new assignments

As of February 1, 2002, **Per Zetterqvist** will assume responsibility as manager for internal communications at the corporate level.

He will replace **Henrik Brehmer**, who is leaving Ericsson for a challenging position outside the company.



**Kristian Teär** was appointed president of Ericsson in Germany starting on January 1, 2002. He will continue in his role as manager for the DACH market area.

## from the archives



Harem girls and magicians kicked off the new year in 1948 for employees at Ericsson's subsidiary Alpha in Sundbyberg, outside Stockholm.

Refreshed by tea and sandwiches, the employees enjoyed songs, dancing and comical sketches in a New Year's review staged by the leisure committee. High points of the evening included Tore Rönngren's solo dance number in a harem costume and Svea Andersson as a magician, according to the report in *Contact*. Following the entertainment, there was dancing until one o'clock.

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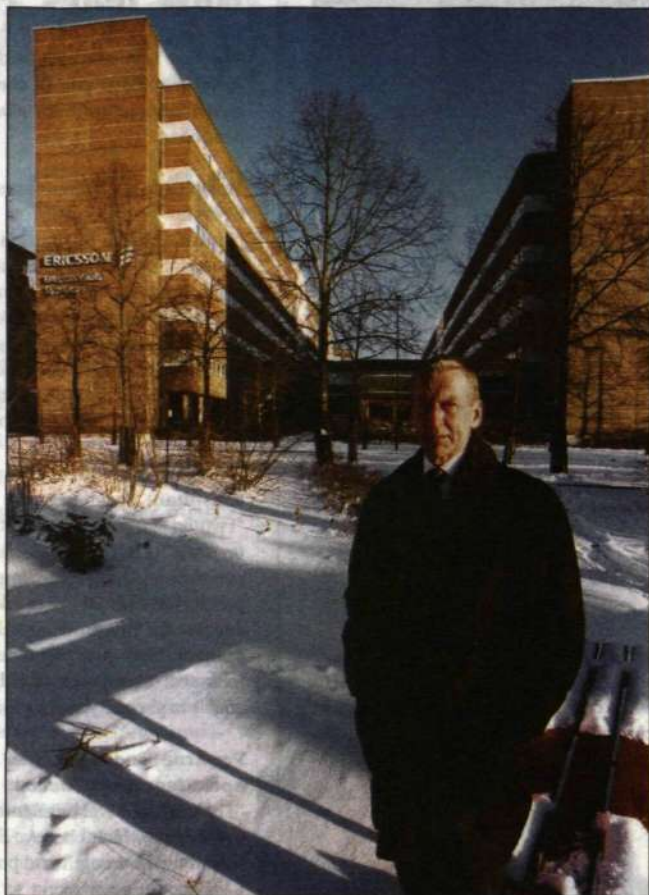
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Anders Larsson, Ericsson Mobile Communications, was an employee 25 years ago when Svenska Radio AB (SRA) became the first company to move to Kista, in northern Stockholm. Although the first building can still be recognized, the surroundings have changed substantially.

PHOTO: ECKE KÜLLER

## First arrival in Sweden's Silicon Valley

In February, it will be 25 years since the county governor of the time, Hjalmar Mehr, inaugurated the first building in Kista, in northern Stockholm. The company was called Svenska Radio AB (SRA) and was the first company to move to Kista, where there was neither a subway link nor a local center.

After 55 years at the same address in Kungsholmen, in central Stockholm, SRA had outgrown its premises. In exchange for three of its properties in Kungsholmen and in the Ulvsunda area, SRA received a plot of land in Kista. According to a land-usage and localization company, Stockholm's Mark- och Lokaliseringsbolag, SRA was the first company to seriously consider locating in Kista.

In April 1976, the building was completed and the company's switchboard was moved. The move was then conducted department by department and, in September, the entire company, including the production section, had moved to Kista. Some 1,300 employees had a new workplace. The official inauguration ceremony was held in February 1977.

A short time after SRA, Ericsson Components – then called Rifa – moved to a new building on an adjacent site.

"Kista seems to correspond to Silicon Valley, the well-known electronics center in California," said

SRA's then president, Ivar Ahlgren, in an interview with the company's personnel magazine at the beginning of 1977. Little did he know how right he would be. IBM was the third company to move to Kista.

"When we moved here, there was no subway or local center. We had the countryside at the door and we often went on forest walks during our lunch hour. We knew where to pick mushrooms and where there were fox burrows," says Anders Larsson from Ericsson Mobile Communications. Twenty-five years ago, he worked on advertising material for such products as mobile radio, pagers, radio links and aviation electronics.

"I was a member of Sundbyberg Ski Club and we were not pleased with SRA, since the company constructed a building on top of the Club's 15-kilometer ski track, thus destroying it. However, the proximity to the countryside gave SRA employees excellent opportunities for training and exercise. The pioneering spirit also created a special solidarity and everyone knew one another.

"For many years, we were surrounded by construction sites, but nobody could have guessed how Kista would grow when we moved here," Anders Larsson concludes.

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LARS-GÖRAN HEDIN  
corporate editor

## Strong start to an exciting year

I would like to give our readers my best wishes for the New Year. The exciting year of 2002 had a bright start, with white expanses right down to the south of Sweden. In the area where I live, the ski track was opened, which has not been the case for many years. The tobogganing slope was full of children who had almost never seen snow before. And in the Swedish capital, there was so much snow that even the traffic wardens thought that the situation was far too difficult.

At the time of writing, the snow is melting again. Hopefully, this will also apply to the business climate in the telecom market. It has been severe in recent months, but we all hope that the temperature will gradually increase during the year.

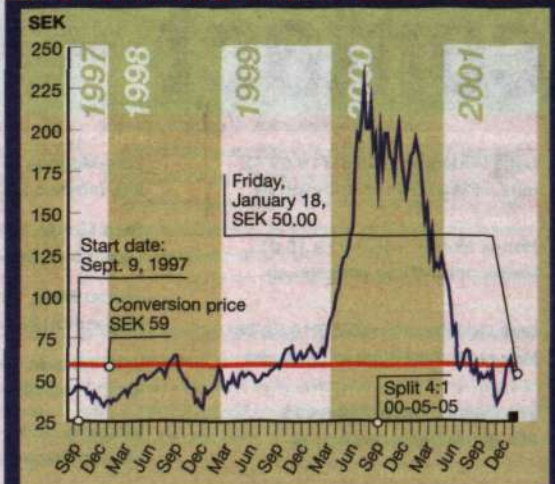
At Contact, we are looking forward to the year ahead. It will be exciting to report on developments. In this issue, we have visited Japan in order to give our readers a preliminary taste of commercial 3G operations – a development that we also hope to be able to cover in closer markets in a few months.

Ericsson's efforts to become a more efficient company are also continuing, including the major restructuring of the supply chain, to which a large portion of this issue is devoted.

With this issue, we introduce an important change. As the observant reader can see in our editorial box on page 23, we are now allowed to use the Swan, a nordic environmental certificate, to show that we are doing our best for the environment. Contact is printed on environmentally friendly paper, produced at one of the world's most environmentally compatible paper mills – Munken, on the Swedish west coast – and it is printed at an environmentally aware printshop.

It is important to look after the countryside and the environment, so that we will also be able to enjoy outdoor activities in a healthy environment in the future.

### The ericsson b share



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