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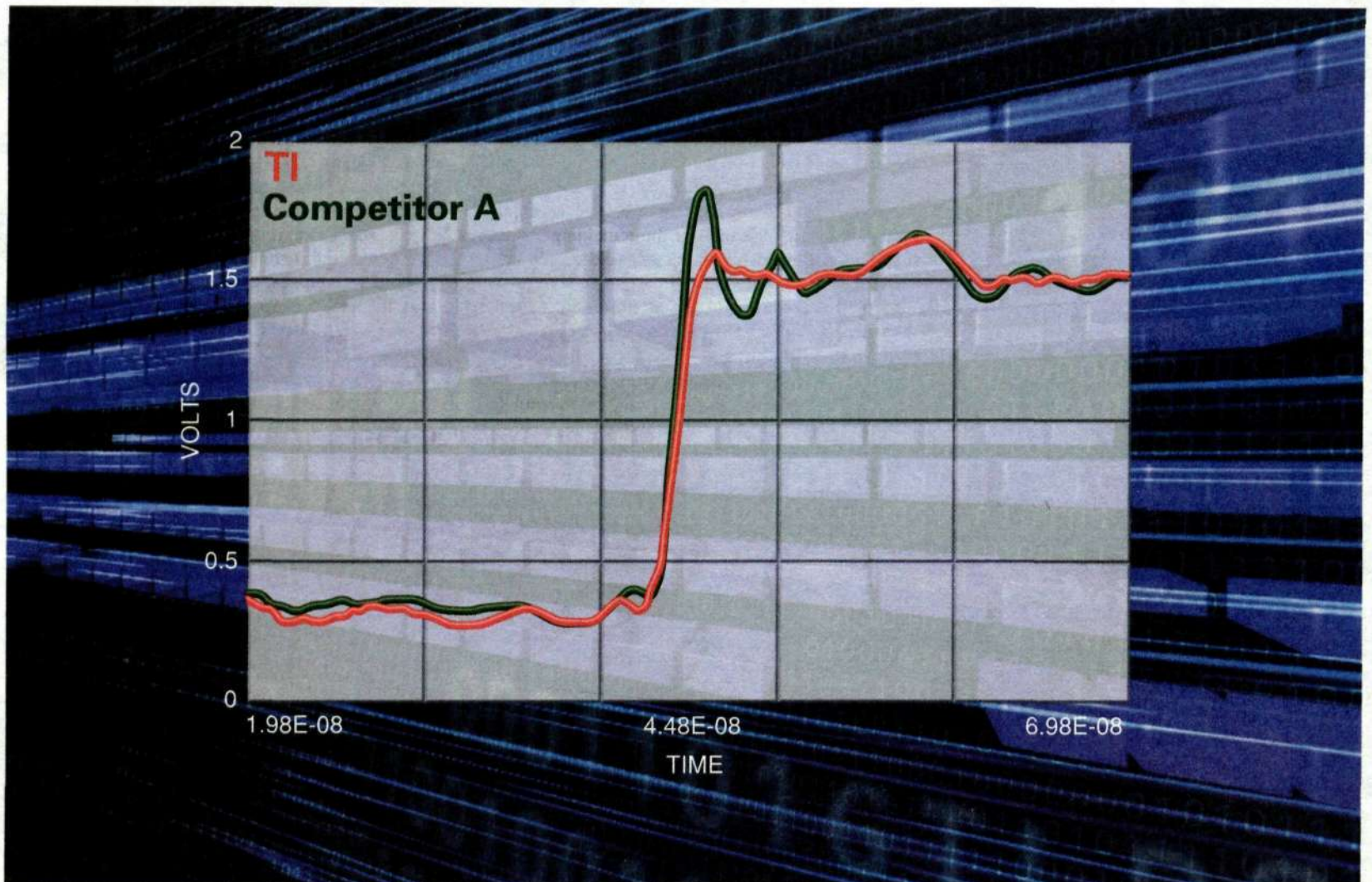
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# New wave in GTLP. Less noise, better signal integrity.



## GTLP: High-speed backplane drivers from TI . . .

incorporate TI-OPC™, allowing for improved signal integrity while achieving less noise. Additionally, TI GTLP (Gunning Transceiver Logic Plus) offers four times the backplane throughput over traditional logic products, as well as multiple package options for networking and telecom equipment. And the majority of devices feature true live insertion capabilities.

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GTLP Device	Function	Bits
<b>Medium Drive (50 mA)</b>		
SN74GTLP817	GTLP-to-LVTTL 1-to-6 Fanout Driver	N/A
SN74GTLP306	LVTTL-to-GTLP Transceiver	8
SN74GTLP16612	LVTTL-to-GTLP Universal Transceiver	18
SN74GTLP16945	LVTTL-to-GTLP Transceiver	2X8
SN74GTLP16912	LVTTL-to-GTLP Universal Transceiver	18
SN74GTLP16916	LVTTL-to-GTLP Universal Transceiver + Clk Buffer	17
SN74GTLP32945	LVTTL-to-GTLP Transceiver	4X8
<b>High Drive (100 mA)</b>		
SN74GTLP1394	LVTTL-to-GTLP Adjustable Edge Rate Bus Transceiver w/Selectable Polarity	2
SN74GTLP1395	Bus Transceiver w/split LVTTL port and feedback path	2X1
SN74GTLP1645	LVTTL-to-GTLP Transceiver	2X8
SN74GTLP1655	LVTTL-to-GTLP Universal Transceiver	2X8
SN74GTLP1612	LVTTL-to-GTLP Universal Transceiver	18
SN74GTLP1616	LVTTL-to-GTLP Universal Transceiver + Clk Buffer	17
SN74GTLP2034	Registered Bus Transceiver w/split LVTTL port and feedback path	8
SN74GTLP21395	Bus Transceiver w/split LVTTL port and feedback path	2X1
SN74GTLP22033	Inverted Registered Bus Transceiver w/split LVTTL port and feedback path	8
SN74GTLP22034	Registered Bus Transceiver w/split LVTTL port and feedback path	8

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Free samples: [www.ti.com/sc/gtlpe](http://www.ti.com/sc/gtlpe) Logic KnowledgeBase: [www.ti.com/sc/lkb1](http://www.ti.com/sc/lkb1)

Chart shown above represents connector fast edge rate on 20-slot backplane from slot to connector during TI internal testing. TI-OPC, Reliable, Logic, Innovation, and the red/black banner are trademarks of Texas Instruments. 54-1787UR

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**TEXAS  
INSTRUMENTS**

# Stock Purchase Plan savings period ends

Due to the great interest among employees and to Ericsson's lower share price, the contributory part of the Stock Purchase Plan 1+1 has been carried out faster than expected. It has taken less than a year, instead of the expected two, for the participants to invest in the number of shares corresponding to the shares available for matching under the plan.

Since the share price has been declining during the year, the employees have also invested in more shares for the money they have been depositing into the plan. To illustrate how the lower share price has accelerated during the expected time schedule, approximately 5 million shares were allocated in May, while the number in August will be 25 million shares.

"Employees who have entered the program will receive their part of the total number of available shares - but the distribution of the shares will be completed earlier", says Marcus Sheard, vice president, Compensation and Benefits.

"The great interest in participating in the plan

shows that the employees believe in the company and its future", he continues.

The 5 million shares that remain in the plan will be allocated during the fall. Initially the plan had 35 million shares, allocated at the Annual General Meeting in March 2001.

A few countries are in the process of starting the program this fall, and the employees will then participate in the allocation of the remaining shares. The Stock Purchase Plan has engaged 26 000 employees since the start in February 2002. The plan is a way for the company to reward those who are willing to make long-term investments in Ericsson shares.

After three years Ericsson will according to plan provide the same number of shares that the employee has purchased. The goal behind the plan is to increase motivation and involvement on the part of employees.

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inside.ericsson.se/incentive\_program/

## STOCK PURCHASE PLAN

The final day for investing in the Stock Purchase Plan will be November 15. The number of remaining shares for future matching will not be enough to invest for the entire contribution from August, September and October. Investments will therefore be conducted in the following manner:

The total number of remaining matching shares will be multiplied by the share price. That sum will

then be divided by the total amount of money that participants contributed during August, September and October.

That figure will then be multiplied by the total amount that an individual employee contributed during that same three-month period. If, for example, the final figure is 300 and the share price is SEK 6, then the employee will invest 50 shares.

# Getting closer to clients

A new strategy for marketing events has been developed to make a stronger impact on Ericsson's customers. The key words are focus and tailor-made customer events. As one consequence, Ericsson will not be present at next years CeBIT exhibition.

Dusyant Patel, head of Event Marketing and Sponsorships, describes the strategy as a focused and cost efficient way to create a close relationship with key customers.

"Since the start of the joint venture with Sony in October 2001 the remaining part of the company is now totally focused on business-to-business," says Dusyant Patel.

Besides trade shows, customers can be reached through a number of activities. Dusyant Patel points out customer seminars, summits, conferences and road shows as good examples. Ericsson is aware of who the customers are.

Focused events to help build close and personal relationships with the customers is a efficient way for a business-to-business company to get the most out of its investments. Behind the new strategy stands the sales and market board as well as the market area heads.

"In the same way as Ericsson has streamlined the organization, focused R&D, product portfolio and geographical presence, we are now looking over event marketing activities," says Dusyant Patel.

A consequence of the new strategy, Ericsson will



As part of a new strategy, Ericsson will be focusing on business-to-business trade shows such as Cannes.

not be present at next year's CeBIT, the annual IT and telecom show in Germany. However, Sony Ericsson will participate.

"In line with the new strategy Ericsson has identified trade shows globally to attend next year. In Europe for example, we will be at 3GSM World Congress in Cannes in February, and World Telecom in Geneva in October. These are two events that are very important for Ericsson. They are specifically oriented towards the business-to-business telecom industry," says Dusyant Patel.

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## Looking for the perfect application

Sony Ericsson is challenging application developers worldwide to create cool applications for its P800 mobile phone. The 50 best proposals will be part of the company's marketing campaign when the telephone is launched.

Engineers and developers at Sony Ericsson will select the coolest applications and proposals will be judged on the basis of creativity, relevance, user-friendliness and "degree of coolness".

Winners will be presented with an "Application Proclamation" on December 1 and proposals will be accepted until October 31.

The best applications will also be included in Sony Ericsson Developer World, a worldwide initiative aimed at strengthening collaboration among application developers. Sony Ericsson is collaborating with Metrowerks, a global leader that develops tools and services for the gaming and mobile phone market.



P800 - cool all by itself.

## China Mobile awards MMS contract to Ericsson

Ericsson has been selected as one of the main suppliers by the world's largest mobile operator, China Mobile Communication Corporation to provide its complete MMS system solutions. The contract includes the MMS Center and peripherals.

China Mobile plans to set up its MMS service centers in four major cities in China, including Shanghai, Guangzhou, Beijing and Wuhan. Ericsson is awarded the contracts in the first two cities. The contract also includes implementation, integration and two year of system support services.

Ericsson has offered China Mobile an end-to-end solution that includes the Sony Ericsson T68ie, equipped with a display in chinese, for project testing purposes. In parallel with the project, T68ie will be available in the China market.

## Multi-service network sold to Moscow

Russian operator LLC TelecomInvest-XXI has selected Ericsson to be the supplier of the company's multi-service network in the Moscow region. Starting next year, the network will be able to offer broadband as well as voice and data services to households and businesses in the densely populated metropolitan area.

"With this contract, we are embarking on a strategic collaboration with Ericsson. We predict extensive utilization of Ericsson's unique experience and extensive insight into future industry developments," says Mr. Grigoriev, general director, LCC TelecomInvest-XXI.

## Strategic order for network in Panama

Ericsson is strengthening its positions in Central America with two strategically critical orders in Panama. Operator BellSouth Panama has ordered a complete CDMA2000 1X network. The deal also includes services and mobile phones from Sony Ericsson. BellSouth currently operates a TDMA network in the country.

Cable & Wireless has selected Ericsson as sole supplier of a GSM/GPRS 800 MHz network. The operator will become the first to offer GSM in Panama, and is also the first operator outside of the US to construct a GSM network operating on the 800 MHz bandwidth.

In a thorny and rapidly changing market situation, it is necessary for all companies to grow more quick-footed and fast thinking. According to Per-Arne Sandström (picture below) Ericsson's chief operating officer Ericsson will emerge from this market situation as an even faster, smarter and more flexible company.



Ericsson must continue to control its costs. This is why senior management is now introducing further savings of USD 1 billion. Intensive efforts are being made to identify new ways of increasing earnings. Read more about the balancing act that will result in a more quick-footed company.

# Lower costs mean more agile company

The current market situation is saturated with uncertainty. Operators are putting their investments on ice or postponing them. This is why Per-Arne Sandström, Ericsson's chief operating officer, emphasizes that the best way to emerge strong from this market situation is by continuing to control the company's costs.

When the market began to slacken about a year and a half ago, Ericsson decided to reduce its costs by USD 2 billion. The company achieved this target by the time set – the first quarter of this year. A couple of months later, senior management saw no turnaround and thus a new decision was reached to reduce costs by a further USD 2 billion by the end of 2003. The target date for these savings has now been moved forward and the savings must be achieved during the first quarter of 2003.

Senior management also views further cost reductions of USD 1 billion, in addition to those already announced, as necessary. These savings must also be achieved during 2003. A total of USD 5 billion shall thus be saved by the end of 2003.

"This is not a savings program and should not be viewed as such. We are constantly reviewing opera-

tions and will continue to do so even as the market recovers.

We have now seen that we can further reduce costs in areas such as IS/IT (see adjacent article), the development of certain products, costs associated with sales, procurement and administration, as well as within certain parts of the delivery chain," Per-Arne Sandström explains.

## Increased earnings

One question that Per-Arne Sandström is often asked is how wise it is to continually attempt to reduce costs. Should Ericsson not concentrate more on increasing earnings instead?

"Obviously new ways of increasing the company's earnings are being discussed every day. Considerable efforts are also being made in this area, just consider the Global Services business unit, which is in a growth phase," he says.

Within the group, several programs are underway, involving, for example, increasing order bookings.

"In our close collaboration with our customers, we are constantly discussing how they can increase traffic

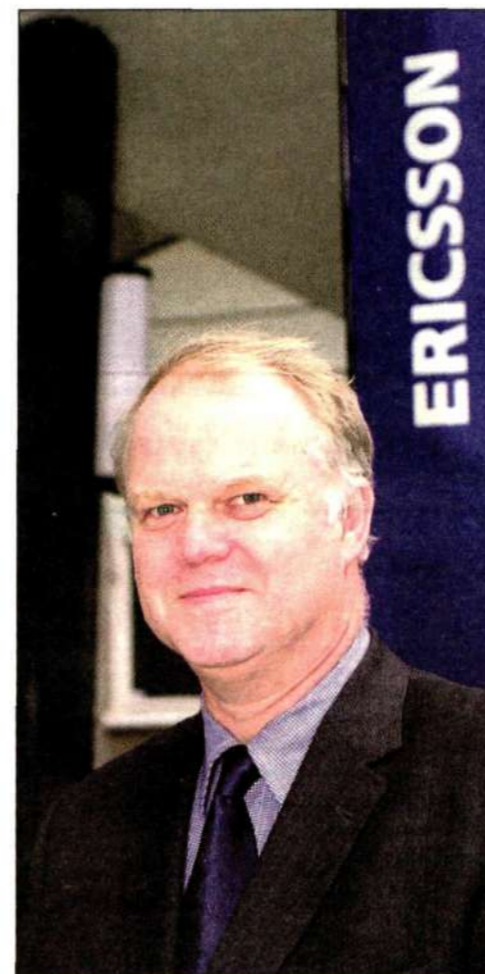
in their networks using new applications. The integration of new services and work on maintaining various types of networks is an important part of Ericsson's expertise in the current situation," he continues.

## Fast changes

In times of savings, it easily happens that the organization is perceived as incoherent or complicated. What can senior management do about that?

"Ericsson, just like all other companies within the field of telecommunications, is currently undergoing a necessary and rapid process of change. I can quite understand that the organization can sometimes be perceived as incoherent. Clear communication is therefore extremely important. We must, for example, be quick to provide information about the changes we are making and their background. For me, simplicity and clarity in operations are two central guiding concepts," says Per-Arne Sandström.

ULRIKA NYBÄCK  
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"To reduce costs, changes must occur globally and all units must keep pace," says Per-Arne Sandström. PHOTO: ECKE KÜLLER

## PER-ARNE SANDSTRÖM'S RESPONSIBILITIES

In September 2001, Per-Arne Sandström was appointed the role of chief operating officer at Ericsson, involving the day-to-day management of operations.

In consultation with representatives from throughout the organization, he makes decisions on issues concerning the product portfolio, research and development operations, and increased efficiency and synergies within the group. On June 1, 2002, he also assumed responsibility for the IS/IT area.

Per-Arne Sandström's senior management group includes the managers of the business and core units who report directly to him. Every second week, he holds a meeting with the heads of the market areas.

Per-Arne Sandström began working for Ericsson 15 years ago. Prior to taking on the role of chief operating officer, he was head of the North America market area.

# Major changes in the IS/IT area

Costs for the IS/IT area must be drastically reduced. The IS/IT group appointed to implement the changes has now identified a number of projects where operations can be made more efficient. These will now be presented.

"Growth during the 1990s resulted in extensive freedom to invest in many different projects and applications within the IS/IT area. Since June, we have reviewed operations and identified a number of areas where we can reduce costs significantly," says Per-Arne Sandström, who assumed responsibility for the IS/IT area in June.

Savings will involve a number of principal areas. Today's plethora of business support systems shall be replaced by a common and uniform SAP-based system. Many superfluous applications will therefore be closed down. The IS/IT applications used within the field of research and development will be standardized and the number of servers and web initiatives will be reduced substantially.

The IS/IT group will also identify which areas Ericsson should continue to work on and discussions will then be initiated with potential partners on their taking

over certain operations (outsourcing). The management structure for the area is also to be reviewed and simplified.

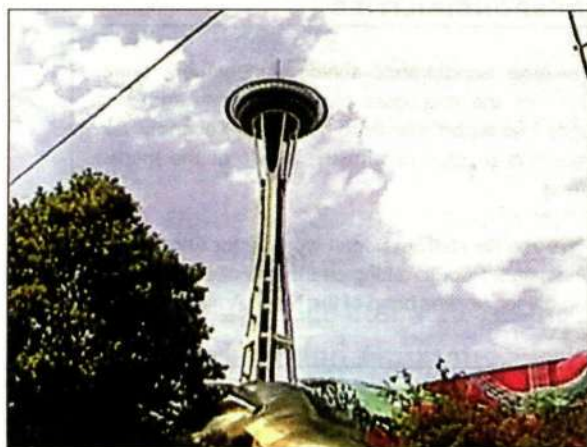
The primary reason for transferring parts of operations to strong collaborative partners is that this allows Ericsson to focus on core operations. At the same time, the wise selection of partners means that Ericsson's business offering in various fields can be strengthened in the long term.

All of these changes are expected to be implemented by the end of the third quarter of 2003. In November, the company will have identified a number of collaborative partners for these operations.

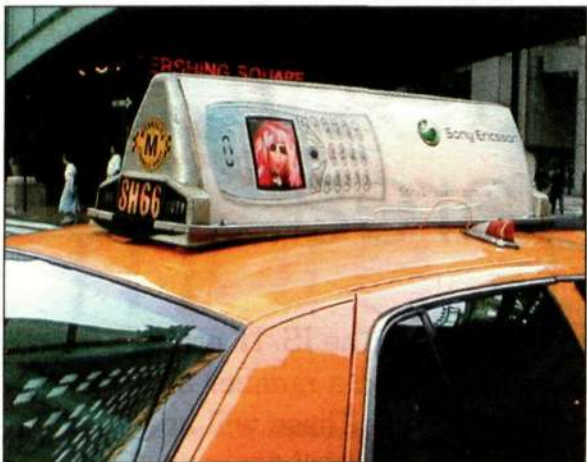
"To reduce costs rapidly, it is important that changes occur globally and that all units keep pace," says Per-Arne Sandström.

ULRIKA NYBÄCK

# Guerilla campaign covers new ground



The Space needle in Seattle is a landmark where you are likely to meet some fake tourists. The new guerilla marketing is very inventive and appears where it's least expected.



Sony Ericsson's latest campaign to promote the T68i in the United States goes everywhere from the disco floor, via golf courses, to popular tourist attractions. And despite the fact that some of the covert methods are exposed in international headlines, the result is simply more positive public reaction.

"We wanted to turn this campaign on its ear, make it cool, make it creative, but on a limited budget," explains Jon Maron, director of Marketing Communications for Sony Ericsson. Jon Maron and his team turned to different agencies and liked the proposal from Fathom Communications best.

Fathom's Ben Tauber helped create the more than 20 components of the overt and covert campaign. "Guerilla marketing allows for Sony Ericsson to bring the product to the people. The best way to create advertising and awareness for the T68i is to allow consumers to touch, feel and use it," says Ben Tauber.

The campaign comprises of several different ways for people to place the product where people will be attracted to it.

To mention just a few: Golf Caddies photograph golfers with the T68i and then e-mail it to the golfers; with Phone Finds, shells of the T68i are randomly 'lost'. When people locate the shell, a display directs them to Sony Ericsson's new interactive site, [www.coolermobile.com](http://www.coolermobile.com). Fake tourists ask people at landmarks to take their picture using the camera-telephone.

Those tourists have generated quite a bit of media. But Ben Tauber says, "New consumers are excited that they found one of our fake tourists. It has turned into a mini-scavenger hunt."

In fact, Jon Maron is thrilled with results so far. The campaign has generated coverage in international

newspapers, television news programs and more. "Information about the ad campaign or about the products themselves has reached an audience of 74 million people so far."

Seattle, Washington is one of the cities 'invaded' by the fake tourists. (The others: New York City, Los Angeles, Dallas, Atlanta, Chicago and Miami.)

Ben Shepherd, one of about 16 fake tourists in Seattle, finds people very welcoming. "We've had a couple of people come up to us trying to understand how to use the phone and where to get this new device, how to play with it and all the cool functions." He adds, "We haven't actually had to say much to the people, they bring the questions to us."

As for whether he'd like to see the tables turned and be approached by a covert marketer, Ben Shepherd doesn't hesitate. "I like gizmos, so I'd probably be pretty excited about that. I think it would be a unique experience."

The campaign has not ignored the traditional advertisements. The T68i and CommuniCam also appear on billboards, taxi tops and in bus shelters, among other locations.

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seminars and workshops focusing on: Business Economics; Strategic Pricing; Communicate Value; Service Logics; Product Packaging – to name a few. New topics can also be added depending on your needs.

The complete program, with detailed descriptions, is available at: [university.ericsson.se](http://university.ericsson.se)

**ERICSSON**

**WHO DOES WHAT IN THE CAMPAIGN**

Sony Ericsson's new marketing campaign in the United States includes the following cast of characters and special events:

**Roving Connectors:** These covert people distribute accessories to the T68i where lots of people gather.

**Leaners:** These are covert actors who use the T68i to communicate with each other in nightclubs, cafes and lounges without revealing that they work for Sony Ericsson.

**Fake Tourists:** Like Ben and Nina in Seattle, they ask people at landmarks to take their picture using the camera-telephone. Positioned in Atlanta, Chicago, Dallas, Los Angeles, Miami, New York City and Seattle.

**Golf Caddies:** They photograph golfers and then e-mail the photos to them.

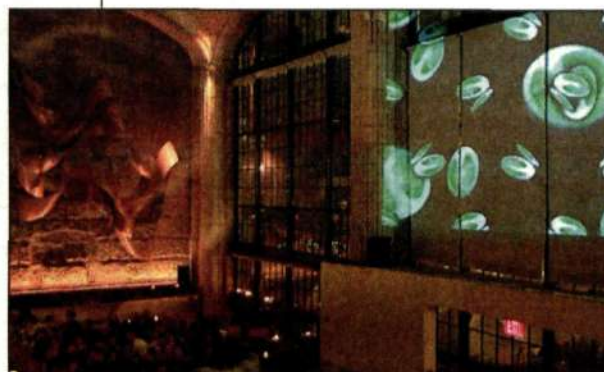
**Airporters:** Drivers clothed in Sony Ericsson branding invite travelers for a free ride to and from

the airport while they listen and watch a product demonstration.

**Interactive Clubbing:** The Sony Ericsson brand is prominently displayed at popular discotheques.

**Phone Finds:** Phone shells are dropped in various locations. When people locate the shell, a display directs them to Sony Ericsson's new interactive site, [www.coolermobile.com](http://www.coolermobile.com). A contest on the site offers a chance to win a T68i (there are 50 up for grabs).

**Connection Centers:** Sony Ericsson Kiosks have been placed at Major League Baseball stadiums, Concerts, and Malls and are staffed with product specialists demonstrating the functions of the T68i and CommuniCam. Sony Ericsson provides t-shirts wrapped in the shape of a phone to every consumer who fills out a survey.



When you go clubbing or when hitching a ride from the airport, Sony Ericsson is there to cater to your needs.



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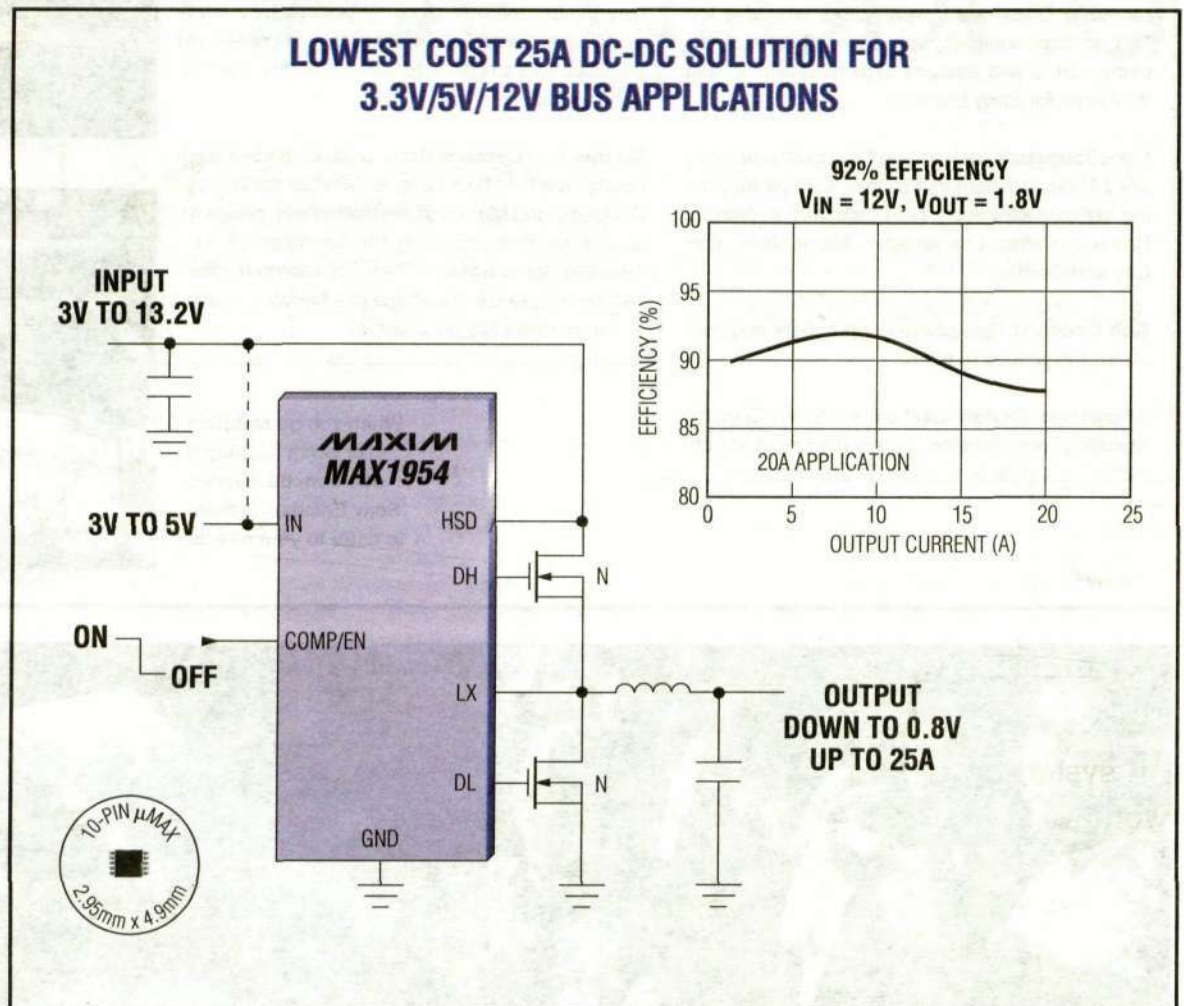
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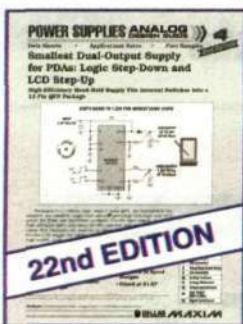
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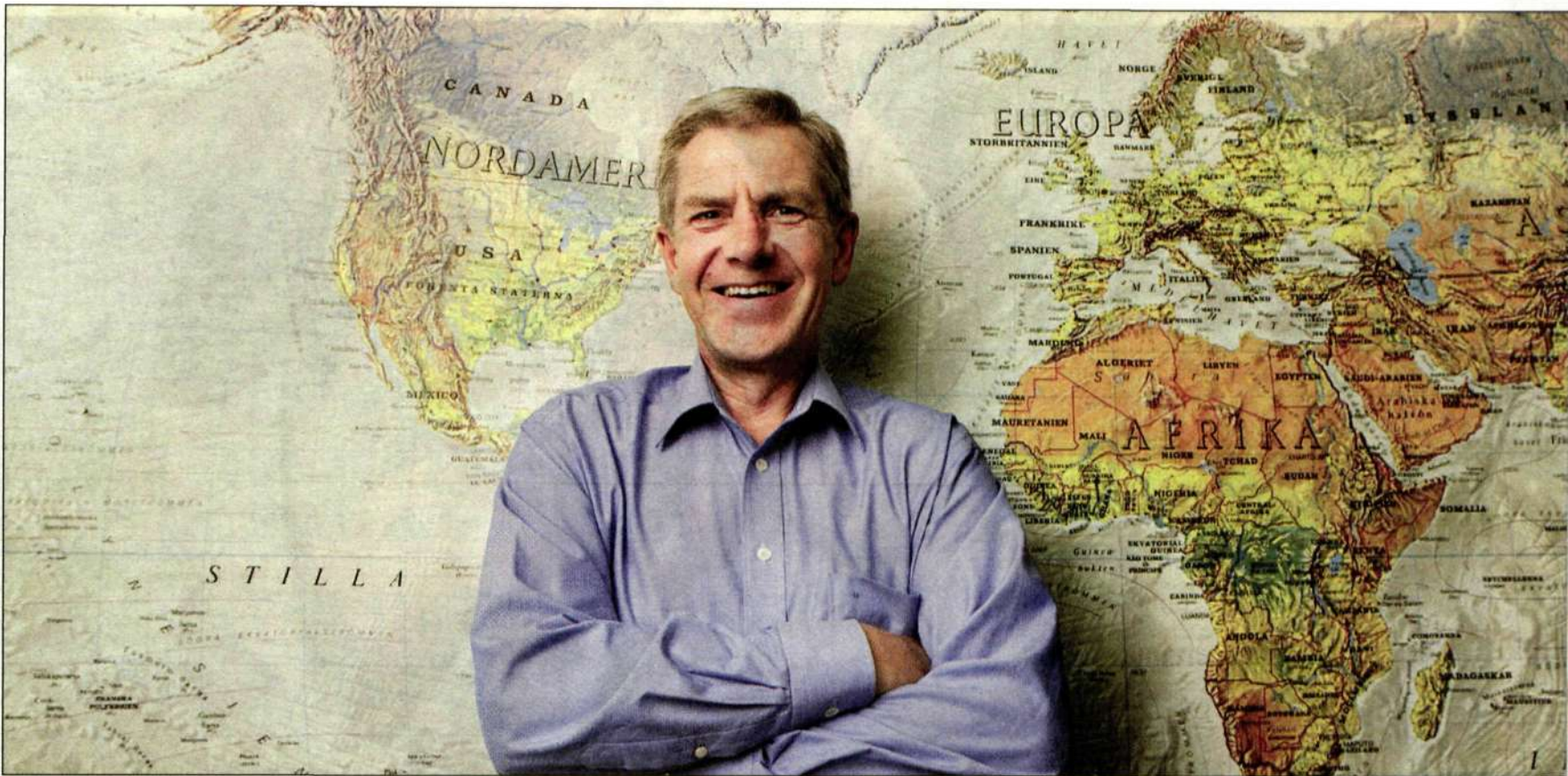
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Åke Persson, manager of the CDMA business unit in San Diego, wants to make Ericsson a significant player in CDMA2000. The CDMA cellular standard is widely used primarily in North and South America and in Asia.

PHOTO: ROLF ADLERCREUTZ

# CDMA advancing

Ericsson is the only telecom supplier able to offer total solutions for both operators who have chosen 3G systems based on WCDMA (UMTS) and those who are investing in CDMA2000, the fast-growing 3G solution for the CDMA cellular standard. The business unit is now working hard to expand its market share.

Ericsson was one of the prime movers in the development of the WCDMA (Wideband Code Division Multiple Access) standard. In the CDMA market, however, Ericsson is a new player and is therefore working hard to win market share.

Åke Persson, manager of the CDMA business unit in San Diego, reports that Ericsson currently has less than a 5-percent market share in CDMA but that ambitious targets have been set that will increase this figure over the next four to five years. By 2006, industry analysts expect that some 30 percent of all mobile subscribers will be using CDMA2000.

"We intend to be a significant player in this market. We have competed for contracts and won against all three of the leading CDMA suppliers," notes Åke Persson.

## Breakthrough in China

One indication of Ericsson's ability to compete in the CDMA market are two major contracts from China Unicom, valued at more than USD 255 million. Ericsson's share of this contract represents a significant portion of Unicom's CDMA capacity in the first build-out phase and is considered a major commercial breakthrough.

Recently, a trial system to China Unicom was upgraded to CDMA2000 1X, including both voice and

data capability. The success of the trial, completed a month ahead of schedule and the first step in making the system ready for commercial traffic, positions Ericsson well for upcoming 1X contract with Unicom.

In addition, Ericsson has shown technical leadership in CDMA by being the first supplier to demonstrate a solution in July 2001 that combines WLAN and CDMA2000 1xEV-DO (Evolution - Data Only) system that is the next step in the development of CDMA.

Ericsson was also the first company to integrate WLAN, CDMA2000 1xEV-DO and Bluetooth for the cellular operator Verizon Wireless in November 2001. More recently, Ericsson was also the first in the industry to demonstrate a solution that combines CDMA2000 and GPRS MMS (Multimedia Messaging Service) in Hong Kong. Despite the fierce battle being fought in the industry in which some suppliers defend one standard over the other, Ericsson supports both WCDMA and CDMA2000.

"Ericsson supports all 2G and 3G standards and believes that there will be significant potential for all 3G standards, since they address different markets and requirements," explains Wendy Fulk MacMurray, marketing manager at the CDMA business unit.

"Ericsson has developed its CDMA2000 and WCDMA systems using the same global 3G technology for switching, radio access, IP services and applications. By exercising leadership in the standards bodies and

## CDMA

CDMA was introduced in 1995 and is today the world's second largest digital standard in terms of subscribers. The standard is currently used in 44 countries, with more than 120 networks installed to date. By the end of March 2002, there were 120 million CDMA subscribers. CDMA is a global standard used in North America, Latin America, the Middle East, Africa and Eastern Europe. Ericsson has CDMA customers in all of these regions except the Middle East.

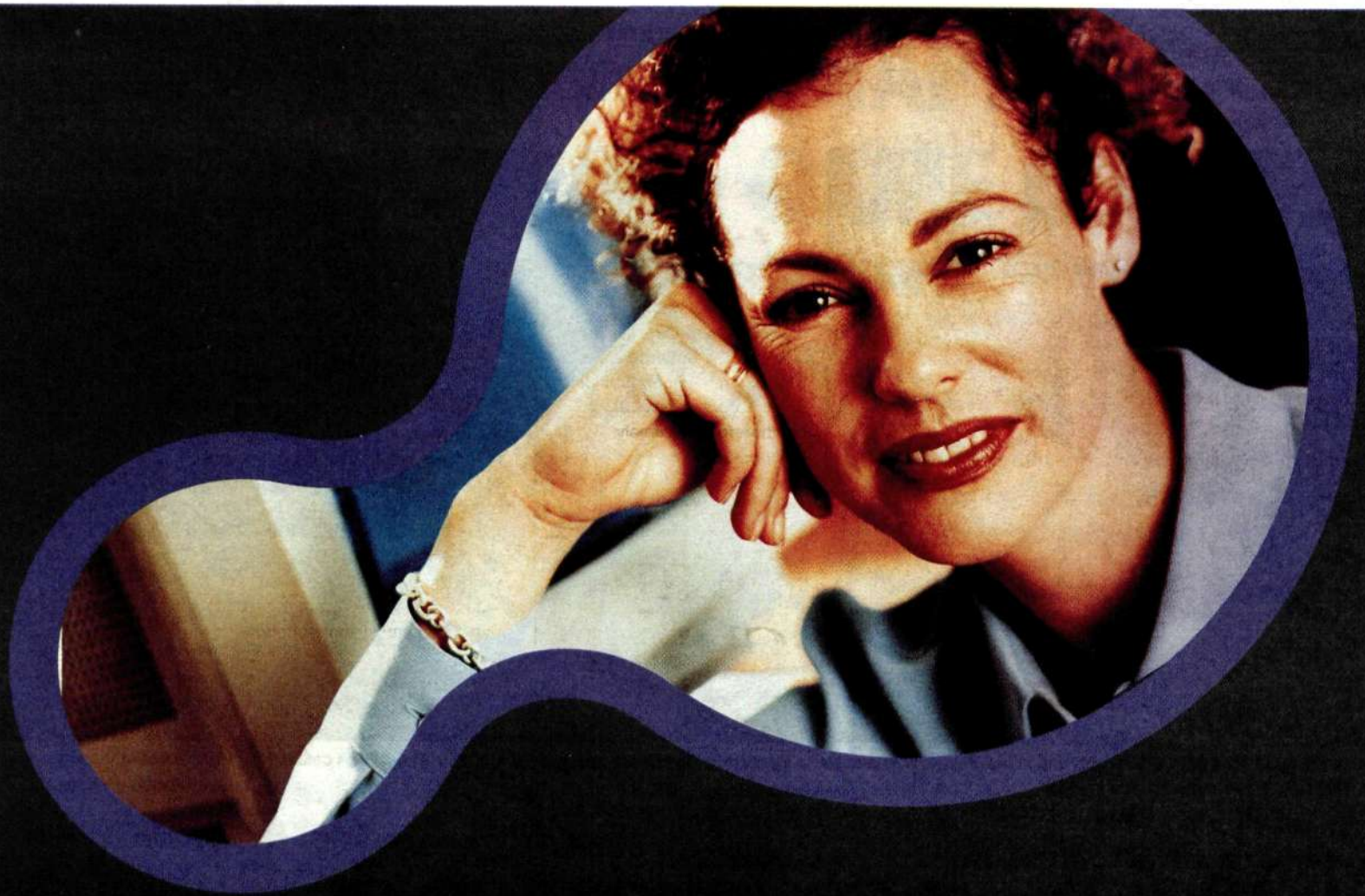
introducing a global 3G platform for CDMA2000 and WCDMA, Ericsson is best positioned to supply a common platform that can support both WCDMA and all phases of CDMA2000 from 1X to 1xEV in a cost-effective manner. Ericsson is unique in this respect," continues Wendy Fulk MacMurray.

## Significant growth

A significant factor for continued growth of the CDMA market is the extension of CDMA2000 for 3G services. Operators are hoping to gain greater voice capacity and higher data speeds up to 144 kbps, while introducing packet data and mobile IP. Similarly, early availability of 1X phones contributes to growth. There are already 17 suppliers producing some 80 models, according to the industry journal 3G Mobile.

Availability of 3G applications will also fuel market growth. In South Korea, for example, which is the most advanced CDMA2000 market, there are more than 160 1X applications, including video on demand, audio on demand, multimedia services and games. In May 2002, there were 14 CDMA 1X networks in commercial operation, and many operators are planning to launch CDMA2000 1X later this year.





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China is an enormous market where mobile penetration remains low. In addition, the government is prioritizing telecommunications. Future prospects are therefore extremely favorable.

PHOTO: LARS ÅSTRÖM

## SMS fever paves the way for data services in China

In China's telecom market there is no recession. The number of users here is rising rapidly and the SMS boom has just begun.

"The possibilities for telecom suppliers to sell in China are huge," says analyst Connie Hsu.

In her report "China's SMS explosion," Connie Hsu, manager of Pyramid Research in Hong Kong, has charted the Chinese mobile market. SMS – and in the longer term, MMS – is seen in China as an important intermediate phase in preparation for more advanced data services.

China Unicom and China Mobile, China's two mobile operators, introduced SMS in 2000, although utilization was slow to pick up.

"It took time to find out how to write Chinese characters on mobile phones," explains Connie Hsu.



Connie Hsu

Currently, Chinese users can send SMS messages using the simplified language Pinyin, or can enter Chinese characters directly via the keypad. Usage is growing fast. During 2000, three billion SMS messages were sent, while during the first quarter of this year fully 15 billion messages were transmitted. In May, it became possible to send SMS messages between the two mobile operators' networks.

### No goldmine

Despite its dynamic growth, SMS has not proved to be the same gold mine for Chinese operators as in the rest of the world. The government is anxious to keep prices low in order to promote development and the price has been set at approximately USD 0.01 per SMS. Prices for voice calls are also being lowered regularly, resulting in average revenue per user (ARPU) falling from USD 21.30 in 2000 to an

expected USD 15.60 this year. Operators must now increase ARPU via data services.

According to Pyramid Research, MMS will pave the way for more advanced services. However, in order for this to succeed, operators must improve at recognizing which services customers want and at marketing these.

And the operators are certainly off to a good start. In June, for example, China Mobile introduced handset subsidies for customers transferring to GPRS.

Connie Hsu is certain that the government will ensure that MMS prices are attractive to users.

"Despite the fact that China is a planned economy, the telecom sector has expanded rapidly. From this, we can conclude that you must either be entirely open to competition or not open at all. Take India for example, where the market has been opened half way, and they are struggling with low growth."

The two existing platforms for mobile data services – China Mobile's Monternet and China Unicom's Uni-Info – are also viewed as important for future use of mobile data services.

### Greater openness for suppliers

However, more companies developing services are needed, according to Pyramid Research. In this area, there are also favorable opportunities for foreign companies. In general, the possibilities for foreign telecom equipment vendors to sell their products in China are extensive.

"The opportunities are vast due to the huge size of the Chinese market and its high rate of growth," says Connie Hsu in summary.

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Read the report at:

bic.ericsson.se → Sources/Pyramid Research

### CHINA'S MOBILE MARKET

- Mobile penetration 2001: 11.4 percent, expected to increase to 16.8 percent in 2002.
- Two state-owned mobile operators. To be increased to four operators.
- China Mobile's market share is 72 percent, while China Unicom is growing constantly.
- SMS value in 2002: about USD 740 billion.
- 2007: about USD 16 billion (estimated)
- SMS and other value-added services share of ARPU: 4 percent. Expected to increase to 22 percent in 2007.
- China's entry into the WTO in December 2001 has opened the door to foreign investment.

Source: Pyramid Research

### i-Mode with a discount

For the first time, NTT DoCoMo is now reducing prices for i-Mode. On September 1, prices were reduced by a third for customers paying more than USD 255 per month.

At the end of July, 34 million people in Japan were using i-Mode. But DoCoMo is experiencing problems in attracting customers to its 3G services, according to the Reuters news agency.

At the end of July, there were 127,400 3G customers, less than 10 percent of the target of 1.83 million by March next year.

### Tele2 increasingly virtual

Tele2 of Sweden is to become a virtual mobile operator in Austria. The company has signed an agreement with Connect Austria (which operates under the name of One) for the use of the operator's network. The agreement does not cover UMTS (3G), since Tele2 first wants to see how that market develops. Tele2 already has similar agreements in Denmark, the Netherlands and Germany and would like to become a genuine pan-European virtual operator.

"We intend to find similar solutions in order to benefit from our strong customer base consisting of 16 million customers in Europe," says President Lars-Johan Jarnheimer.



Lars-Johan Jarnheimer

### 3G good for KDDI

Japanese consumers of 3G are spending more than analysts predicted. The average KDDI subscriber spent USD 88 a month on services, while expectations were placed between USD 68 and 85. The operator KDDI reported an ARPU of USD 64 for April through June.

KDDI now has two million 3G subscribers. To achieve its target number of seven million by March next year, the company will launch a video service in October. KDDI says that they will be the first operator offering a mobile handset that can record and send video clips of up to 15 seconds.

Competitor J-phone's Movie Sha-mail offering can handle video clips up to 5 seconds.

### Starbucks go wireless

American coffee shop chain Starbucks is now opening wireless surf cafés in Europe. Through cooperation with German operator T-Mobile, Starbucks can soon offer their coffee-drinking customers a wireless connection to the Internet.

The wireless coffee shops will to begin with be established in France and Germany, but in time wireless coffee drinking will be available at a coffee shop near you.

### Risk for MMS setback

Multimedia Messaging Service may be an excellent technology but its success risks being damaged by the industry's high expectations, according to the Wireless World Forum (W2F) research company.

The company underlines that the development of MMS cannot be compared with that of SMS. Users perceive SMS to be cheaper and easier to use than voice. The key market for messaging is young people and the initial cost of MMS will be too high to attract them.

According to estimates, 10 billion MMS messages per month will be sent within two years. W2F predicts that 200 million MMS messages would be a more reasonable figure.



Overestimated?

www.w2forum.com

# TV show breaks ground for positioning

For most of the general public, mobile positioning remains a relatively unfamiliar service. A new interactive television show on Sweden's Channel Four, Position X, will arouse interest in a number of services based on the possibility of determining the position of your own mobile phone and that of other people's. At least that is the view of the program's principal sponsors, Swedish operator Telia and Sony Ericsson, who will be simultaneously launching a major advertising campaign for FriendFinder, one of some ten positioning services offered by the operator, and two Position X mobile phone packages.



Television personality Martin Timell is the host of Position X on Sweden's Channel Four. Using interactive technology, viewers are able to follow the show's participants around the clock using their mobile phones or a special website.

**A new entertainment program** on Swedish Channel Four provides an exciting example of how mobile positioning can be used. The Position X series will be broadcast five days a week. Hosted by Martin Timell, one of Sweden's best-known television presenters, and featuring many celebrities among its participants, the program is expected to arouse great interest among the public.

Each week, the program follows three pairs of escapees who are to be localized and, if possible, secretly filmed by a number of Pursuers. A key feature in the organization of the program, which has been developed by the Nordic production company Strix in collaboration with Channel Four, is modern mobile positioning technology from Ericsson. The solution is called Mobile Positioning System (MPS) and has, to date, been supplied to Telia and some 20 other providers around the world.

In principle, Position X is a modern version of cops and robbers. All of the escapees and Pursuers in the show are equipped with mobile phones. The mobile positioning system allows viewers to follow the hunt continuously by obtaining readouts of the teams' positions via SMS or WAP, either on their own mobile phones or via the Internet.

#### Expanding service area

The same technology used in the program forms the basis of several other "Location-Based Services." These employ mobile positioning to determine the location of the user and his/her phone.

"Mobile positioning is an area of services for which we have great hopes. The function can be used for information and marketing, security and various tracking services, gaming and navigation," explains Jörgen Jonsson, who is responsible for Location-Based Services at Telia Mobile.

"One of our latest mobile positioning services is called FriendFinder. It has just been named Best Ser-



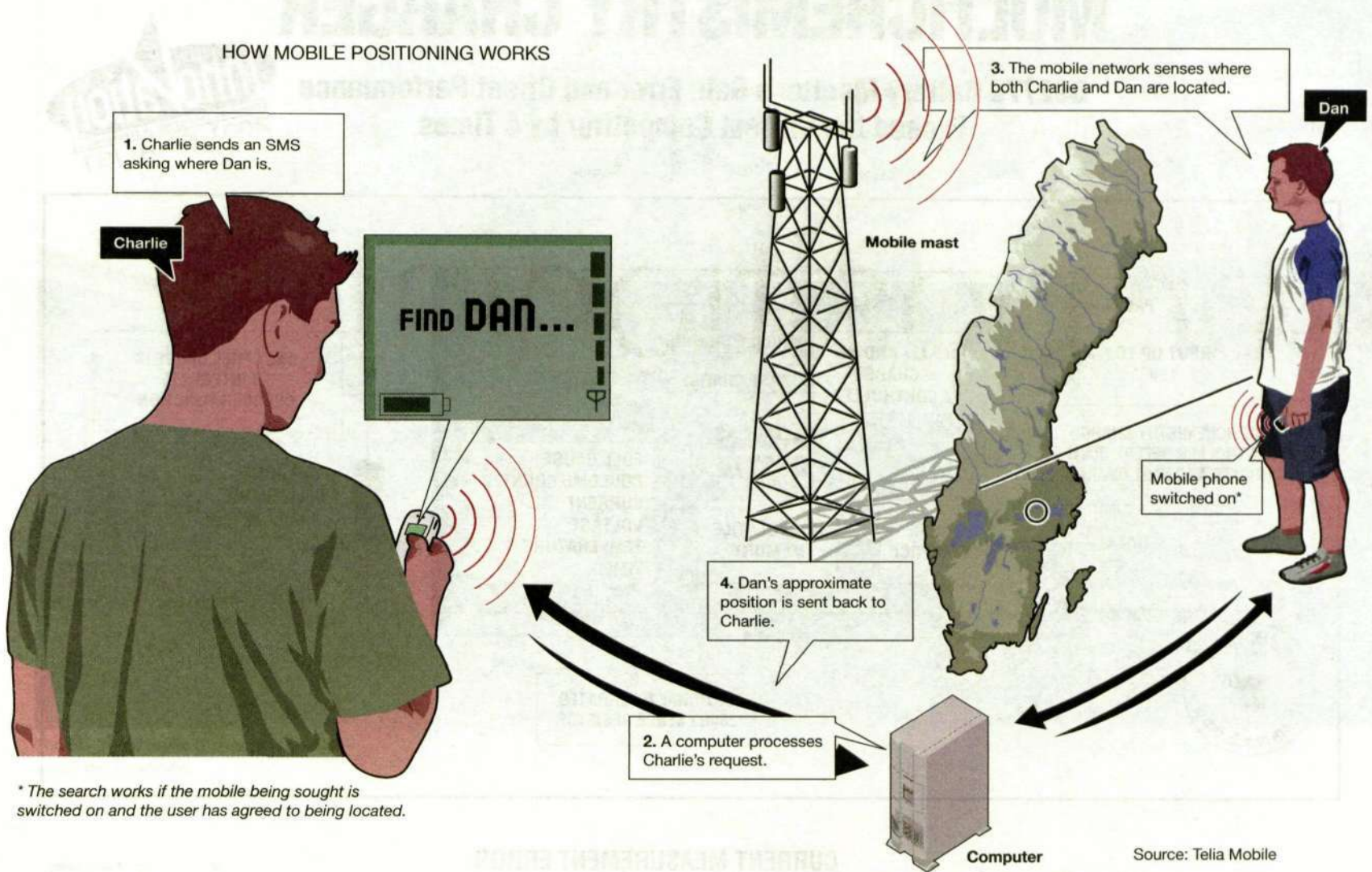
In parallel with the television program, Telia is collaborating with Sony Ericsson to initiate a major advertising campaign involving television, magazines and 600 stores. The Position X package, including a Sony Ericsson R600 or T68i with a CommuniCam digital camera, is being marketed with information about a number of mobile positioning services.

vice by the readers of the Mobile special-interest magazine," says Jörgen Jonsson. The service is practical if you have agreed to meet someone and want to know where they are or if you want to know where your kids are."

#### Major advertising campaign

In connection with the television series, Telia and Sony Ericsson will be marketing FriendFinder and two dif-

HOW MOBILE POSITIONING WORKS



\* The search works if the mobile being sought is switched on and the user has agreed to being located.

Positioning services use the mobile network's ability to determine the location of a phone. All existing phones can be used and the technology also functions indoors, as long as there are base stations nearby.

ferent Position X packages through a major advertising campaign. The Position X packages contain either an Sony Ericsson R600 or a T68i with a CommuniCam digital camera. The campaign will also include tips and information about a number of Telia's mobile positioning services.

Breakthrough expected

"We believe that Position X will arouse interest and contribute to achieving a breakthrough for the use of mobile positioning by regular users in Sweden. We already have in place other Location-Based Services, such as Gula Sidorna Nära Dig (Yellow Pages Near You) which, for example, enable you to find the closest gas station, pharmacy or grocery store," says Jörgen Jonsson.



Jörgen Jonsson

"An increasing number of people are also becoming aware of the advantages that positioning services provide in professional fields of use, such as monitoring goods and vehicles in the transportation industry and

various security applications. The professional segment will probably be of most interest to the majority of operators," he adds.

Great challenge

The greatest challenge with regard to new mobile services is getting users to actually use them.

"In the Position X campaign, we will be emphasizing customer benefit rather than the technology. The television show provides a fun example of how mobile positioning can be used, which everyone can then try for themselves in their own neighborhoods. Our phones will be seen on-screen each day, giving an extra boost to the sales successes we are currently enjoying," says Roger Bolander, who is responsible for the Nordic countries and Baltic States at Sony Ericsson.



Roger Bolander

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SERVICES

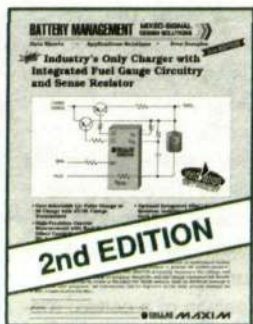
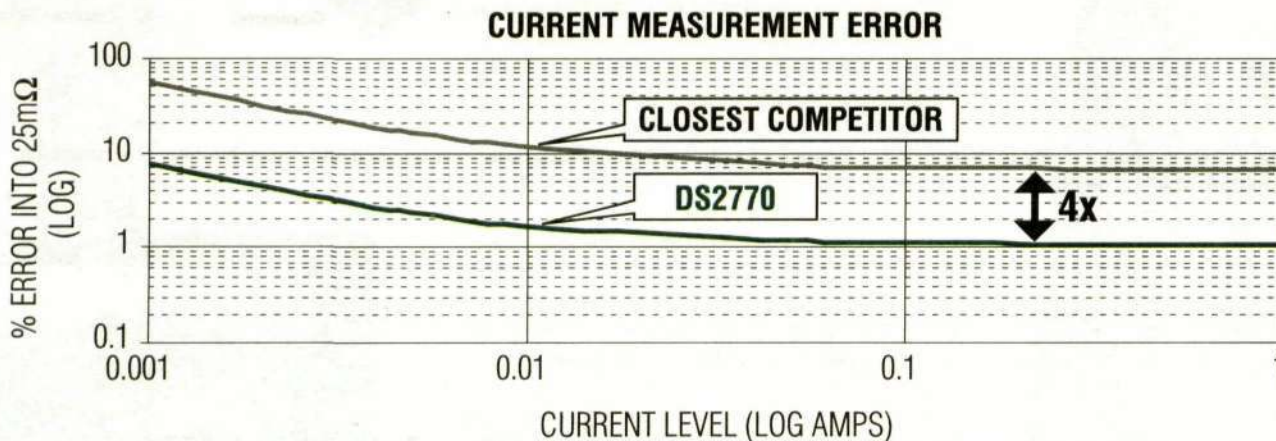
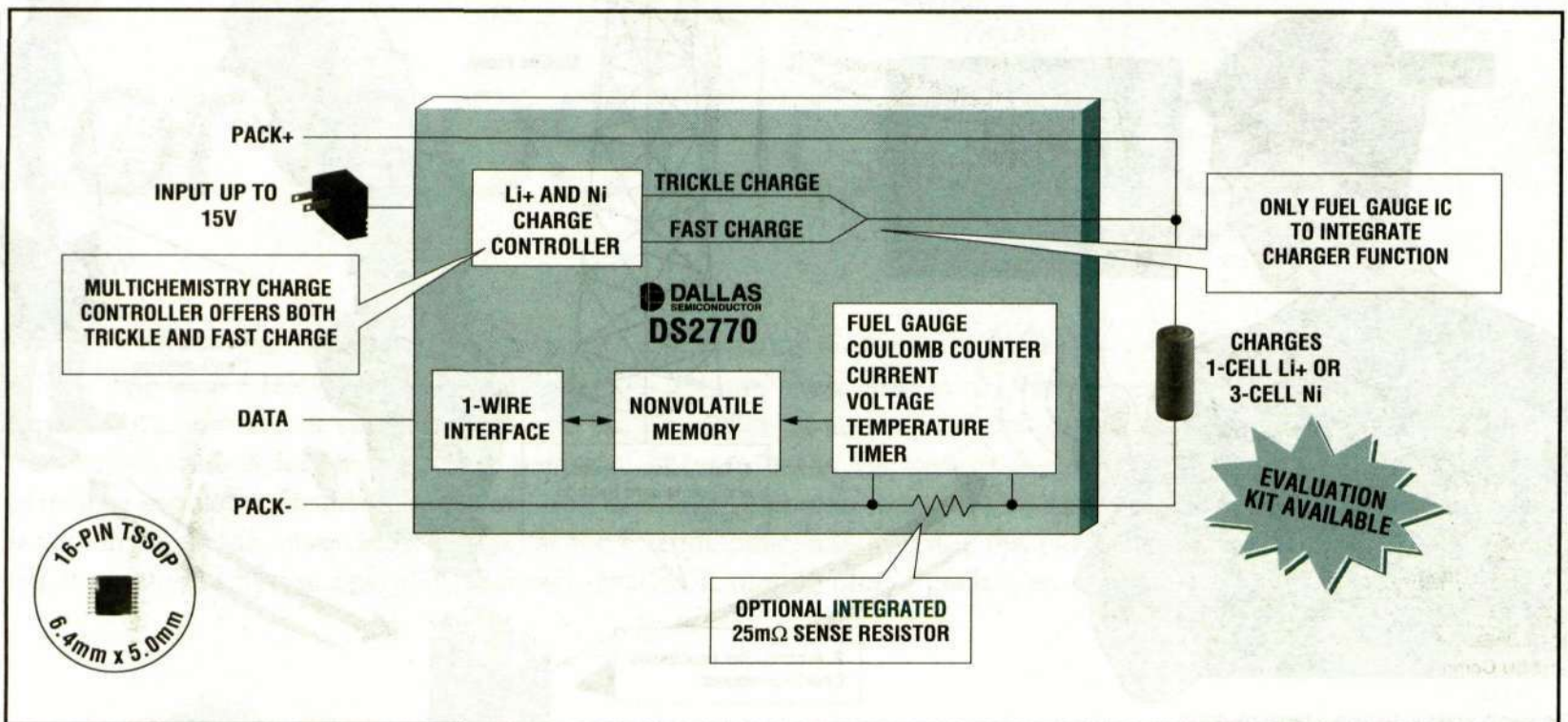
Telia launched its **Gula Sidorna Nära Dig** (Yellow Pages Near You) service in June 2000. Today, the company offers some ten services using positioning, within the fields of gaming, information and corporate applications. **Rätt Väg Nära Dig** (Right Route Near You) provides information about distances and the most direct route to a certain destination. **Väder Nära Dig** (Weather Near You) provides an up-to-date local weather forecast. **Bostad Nära Dig** (Home Near You) displays any homes that are for sale near your current position.

**FriendFinder** displays the position of a certain mobile telephone (if the user has given his/her permission) and can thus be used to play **Position X** in your own neighborhood. **Botfighter** is an example of an interactive game based on positioning and could be called virtual paintball.

Other fields of use include tracking services, specially targeted advertising and goods handling, which can cover all types of transports from bicycle couriers to haulers. Combined services, such as MMS with positioning, will be available shortly.

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The EU Commission is expected to approve plans for T-mobile and the operator mmO2 to build a joint network in the UK. A similar agreement in Germany is also likely to get the go-ahead.

PHOTO: STEFAN BORGIUS/PRESSENS BILD

# EU says yes to shared 3G net

A decision is expected from the EU Commission to facilitate the building of shared 3G networks in Europe. This could provide a boost for the 3G build-out.

"This is highly encouraging. Through sharing the network and the costs, the operators can achieve coverage quicker, which stimulates traffic and increases revenues. This makes it possible for operators to finance the build-out faster," says Torbjörn Possne, vice president WCDMA.



Torbjörn Possne

Deutsche Telekom's British subsidiary T-mobile and the operator mmO2 initiated the move by requesting permission to build a joint 3G network in the UK. The EU Commission is expected to announce its support to the plans within the next few days as well as a similar agreement in Germany, according to the Financial Times.

One of the reasons that operators want to cooperate

in the build-out is the high license fees in many instances in Europe. By cooperating, T-mobile and mmO2 expect to save about 30 percent compared to the cost of separate networks. Commenting on this development, the Commission's spokesperson on competition issues, Amelia Torres, says that the competition rules still apply and that the other interests in the market will be consulted prior to final approval of the agreement.

## Several solutions

Ericsson was early to recognize the need for shared networks and has developed several solutions so that operators can share the net. Moreover, Ericsson landed the first order for a shared 3G network when Swedish Telia and Tele2 signed a contract for Ericsson's solution. This network has now reached technical launch and

the rollout is fully under way. The network can be fully or partially shared, for example by building separate networks in major cities and a common network in less densely populated areas. When traffic and revenues increase, the operators can choose to split into separate networks.

## "A clear signal"

Torbjörn Possne says: "The Commission's acceptance of this solution in Europe is a signal to the market, to the industry and to the public that the EU supports the new technology. This is important as a counterbalance to the doubt in 3G that is spread today. In this context, I also want to mention Hutchison's strong support for WCDMA in the press recently. And I am happy to say that we are still a market leader for WCDMA, and want to stress the importance that we keep it this way the coming months when the networks starts to be launched and the suppliers go from commitment to reality."

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# Business

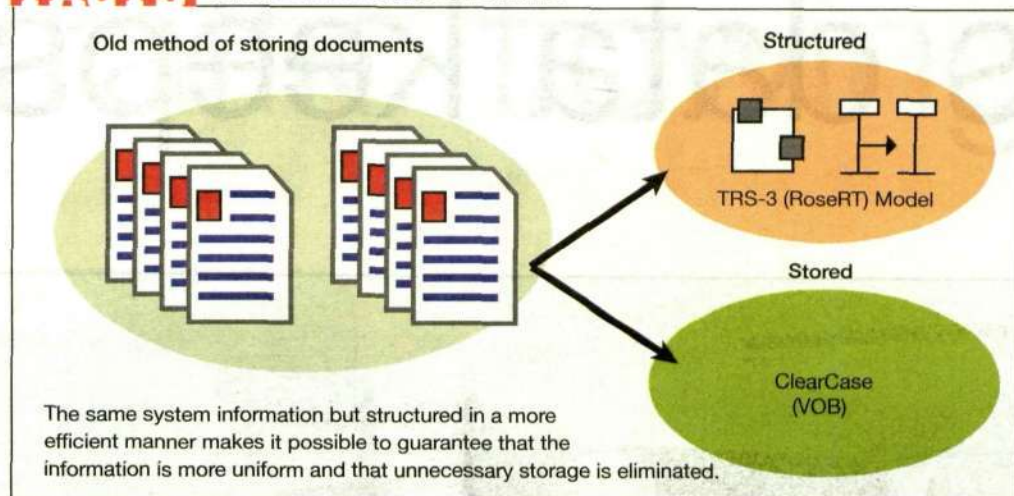


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## EFFECTIVE STRUCTURING



## Efficient development of GSM base stations

New work methods in the design of GSM base stations have made system development more efficient and resulted in improved and more uniform system designs. Key to these changes are UML (Unified Modeling Language) and the model-based tool Rose Real Time (RoseRT).

Previously, gaining an understanding of system design required reading and assimilating hundreds of pages of documentation. Today, this knowledge can be acquired much more easily by studying the system's architectural and functional components.

This also makes it possible to re-use system information in a more uniform manner so that unnecessary data storage is eliminated. Using UML and Ericsson's own design rules, the system's architecture, components, functions and functional integration can be easily described. The tool in which the system structure for GSM base-station software is realized is Rational RoseRT.

A model in RoseRT is normally composed of a number of files arranged like the petals of a rose. Currently, the model consists of some 3,000 files, for which version management is required. Administering this large volume of information requires extensive CM (Configuration Management) expertise, not only in the CM role, but also on the part of individual design engineers.

ClearCase is used as the CM tool and is directly accessible from RoseRT. All generated documents include CM information from ClearCase allowing the documents to be recreated.

More efficient use and administration of project tools is achieved because all project members use the same Windows Terminal Server (WTS) and an ICA client. Organizing work in this manner facilitates code exchange and updates of programs and scripts.

### No functional changes

System modeling does not entail any functional changes in the system. The existing system has been converted to UML, while the functional changes will

be included in the system model starting with R10, which will be the next release. Enhancing the model-based code base that has now been generated will be easier, and system development will be able to deliver a consistent, high-quality product to the design team. In R10, design and testing will receive system documentation similar to that previously produced but which also includes new documents that are more suitable for further development.

These documents are generated automatically by the system model. Generating a 20-page document is accomplished by simply pressing a button and takes only seconds.

RoseRT includes support for document generation via Rational's SoDa tool. Ericsson, however, has elected to generate documents using its own scripts.

### Major benefits

The greatest gains are achieved through re-use of information starting as early as the feasibility phase, from quality improvements that allow quality controls to be introduced at an earlier stage of the project, and by producing better design documents. Combined, these benefits make system development more efficient, thus positively affecting the entire development project. The fact that modern work methods and tools are being introduced will undoubtedly facilitate future recruitment. Students now learn UML as part of their university studies.

The WCDMA product unit has shown great interest in the GSM modeling work. If everything succeeds as planned, more and more design engineers throughout Ericsson will be able to work with the same development processes, tools and environments. Modeling work has been conducted as a joint project by Ericsson's Swedish GSM units in Luleå, Skellefteå and Kista.

DAN STENVALL

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**Footnote:** Dan Stenvall is senior system designer in the product area GSM base stations.

## UML - UNIFIED MODELLING LANGUAGE

UML was created by Grady Booch, James Rumbaugh and the Swede Ivar Jakobsson. These three gentlemen put their head together in the mid-1990s and created the various components of UML.

By creating a common language that can be used for all types of systems, an important step was taken toward the industrialization of methods for specifying and developing systems in an object-oriented manner.

## Bluetooth gaining ground

Bluetooth radio technology, which will eliminate the cords between computers, mobile phones and other devices, is finally beginning to gain ground. Earlier forecasts, which were more than a little optimistic, can be forgotten. Sales of Bluetooth chips, however, are expected to be three times greater this year than last year and amount to 33.8 million, according to Allied Business Intelligence (ABI). Thereafter sales are expected to increase rapidly. ABI expects that sales of mobile phones will determine Bluetooth's future, since they account for more than two thirds of all Bluetooth devices.

[www.allnetdevices.com](http://www.allnetdevices.com)



Good™G100 for wireless messaging.

## Good chooses Mobitex

At Cingular Wireless' well-attended WAVE conference in May, one of the main product announcements was made by California-based Good Technology Inc. Cingular will now use the company's Xpress Mail GoodLink Edition to offer several attractive services over its nationwide Mobitex network, which was supplied by Ericsson.

With GoodLink, which is a wireless messaging system for Microsoft Outlook targeted at corporate clients, users can read their e-mail, including attachments, directly on a handheld PDA. Synchronization between the PDA and the office PC is wireless and continuous.

GoodLink has previously been available on RIM's Blackberry handheld, but Good is now launching its own handheld, the Good™G100.

The new device is a powerful and robust wireless PDA with a grayscale screen and an ergonomic keyboard.

[www.cingular.com](http://www.cingular.com)

[www.good.com](http://www.good.com)

## Send faxes, SMS and minicall directly from Outlook.

If you need to access your Ericsson mailbox but do not have access to your Ericsson PC, you can use the Internet Mail Access service. You can also read and send e-mail, although attachments cannot be read.

If you need an attachment, ask a colleague to send the file to the nearest fax mailbox. In Outlook, simply enter in the address field (To:) faxnumber@fax.ericsson.se or whatever the local address may be. SMS messages can be sent in the same manner to mobilenumber@sms.ericsson.se.

You can also use the Telematic Services feature. In Outlook, select New and then New Form. Click on Telematic Services and then on To Fax and Ericsson's global address list will be displayed. If the recipient has specified his or her fax number in the Outlook profile, the message will be automatically routed to that fax number. Note that in Outlook, you must use plain text or Rich Text Format (not HTML). Check your setting under Format.

If you choose Telematic Services, a fax costs USD 0.56, an SMS USD 0.19 and a minicall message USD 0.22.

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# Wireless data keeps

"Many companies currently working with call center and messaging services want to expand their business. For these companies, mobile data services offer a new market. There are opportunities outside Ericsson's traditional customer base, and Mobitex should be an attractive product for many Ericsson companies around the world," says Tomas Lundkvist, sales and marketing manager for Mobitex.

Mobitex was developed in the early 1980s and sales were relatively modest during the early years. About three years ago, however, sales began to climb, and growth has continued. The reason for this increased interest is undoubtedly that e-mail has become increasingly common and that attractive terminals such as RIM's Blackberry and the Palm 1705 have emerged.

"There will be a need to use narrowband for wireless data transmission for many years to come," predicts Tomas Lundkvist, adding that a data speed of just 8 kbps is not a disadvantage.

"This speed is more than enough for a large number of applications. Mobitex is built for data, which means that it is very stable and highly reliable," explains Tomas Lundkvist.

Stephen Carter, president of US operator Cingular Wireless, emphasized the same point in a speech this spring.

"There will always be customers and situations for which a Mobitex network is the best solution in terms of functionality, economy and applications, so that is what we will offer. Other customers may have a need for other solutions based on GPRS and EDGE, which we will also offer. We believe that the ability to offer customers the best network for their requirements is a major advantage," notes Stephen Carter.

Cingular's nationwide network was already operating ten years ago. Today the US operator has the world's largest Mobitex network with about 900,000 subscribers. Most Mobitex operators, however, are smaller companies with regional networks with between 30,000 and 50,000 subscribers.

There are also a number of private networks. One example is RATP's (Regie Autonome des Transports Parisiens) network in Paris, which is used for its bus system. (See separate article.)

Traditionally Mobitex has been strong in what are called vertical markets in areas in which security requirements are extremely high, such as police, fire and



To reduce traffic, the authorities in Paris are investing in improvements of the city's transportation system. With Mobitex, bus passengers and drivers receive faster and more accurate traffic information.

ambulance services and credit-card verification. Many companies in the transport sector, such as bus and taxi companies, also use Mobitex. The same applies for companies working with logistics and transport.

Mobitex was designed for wireless data, which means that the network is stable and reliable and that data traffic is never held back by voice traffic.

Another interesting area is telemetry, which includes communication with machines. In this area, Mobitex is used for meter reading, remote control and alarms.

The horizontal market and mobile professionals have become increasingly important in recent years. The primary application in this segment is wireless e-mail, which allows employees to read and send e-mail even when out of the office. Because Mobitex includes push functionality, e-mail is automatically received on the terminal without having to establish a connection.

Development of terminals for mobile data services is important for subscriber growth. In this area, Ericsson works with several companies and contributes to development by providing guidance, testing products and mediating contacts with operators.

## Many different applications

Excellent applications and terminals are driving the development of Mobitex. With respect to GPRS, many operators are looking for a killer application, but Tomas Lundkvist does not believe there is such an application for Mobitex.

Instead it is a question of many different applications developed in different parts of the world. User

groups include police forces, taxi companies, stock brokers and people who bet on horses.

Ericsson's Mobitex system is currently in operation in some 30 countries. Brazil and China are two important new markets. The Chinese operator Sky Networks Communication Group Co. Ltd. is a good example of a company that wised to broaden existing operations that included call center, messaging services and satellite communications, by adding mobile data. With Mobitex, the operator will be able to offer its subscribers access to the mobile Internet.

## Market continues to grow

The tremendous interest today for GPRS and 3G has increased interest in mobile data services. Tomas Lundkvist believes that the market for Mobitex will continue to grow as new companies become operators. In addition to companies that work with messaging services, there will also be companies that were unsuccessful in obtaining a 3G license but that are still able to build a mobile data business with Mobitex.

"Mobitex is a product that can generate sales today for local companies. There are significant opportunities for both private and public networks. Mobitex can also give sales representatives at Ericsson companies valuable knowledge in this area. Selling mobile data is different than selling mobile telephony because it requires changes in the customer's business processes," concludes Tomas Lundkvist.

GUNILLA TAMM

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# traffic flowing

## Mobitex serves buses in Paris

The authorities in Paris are investing in improved public transport. Today there are nearly 2,000 buses equipped with an information system that uses Mobitex to give passengers and drivers faster and more accurate traffic information. Within two years, some 4,000 buses and 5,000 bus stops will be equipped with the same information system.

In Paris, RATP (Regie Autonome des Transports Parisiens) conducts regular surveys of how bus passengers perceive service. These surveys show that while passengers understand that a bus may be delayed, they want to know how long the delay is so that they may choose an alternate route and do not have to wait at a bus stop. The surveys also show that passengers are concerned about safety on the bus.

Against this background, RATP decided to use Mobitex and two applications called Aigle and Altair to improve security and provide more information. In addition to Mobitex, both applications use GPS (Global Positioning System). RATP was granted a license some years ago to operate its own Mobitex network.

"Mobitex is a robust and very reliable system designed for packet data. It is well suited to our requirements and should be an attractive alternative for other bus companies, as well," says Peter Gavigan, who is a telecom engineer at RATP.

The Aigle security system is currently installed in all of RATP's more than 4,000 buses. The system enable bus drivers to send out an alarm that indicates where the bus is

located and what has happened. This information reaches dispatchers immediately. Since the system also includes RATP's maintenance vehicles, traffic controllers can immediately dispatch help to the accident scene.

The Altair application consists of two parts, one for information to passengers and one for operative assistance. The latter component enables traffic controllers to obtain such information from the bus drivers that they can control bus traffic in an optimal manner.

Bus passengers receive information both inside the bus and at bus stops. During the bus ride, the information includes the name of the next stop, as well as the connecting times for major connection points. This information is updated every 60 seconds.

"Paris bus passengers appreciate receiving information in real time and being able to rely on the information. This was not the case previously," notes Peter Gavigan.

In addition to 60 bus routes, the Mobitex system serves two streetcar lines, which also use the Aigle and Altair applications.

"The network in Paris is an excellent example of how Mobitex can be used for custom applications in a private network. A bus application allows the transport company to improve service and security, while utilizing resources more efficiently. There is demand and interest among many local transport companies, since many large cities have major traffic problems," concludes Tomas Lundkvist, sales and marketing manager for Mobitex.

GUNILLA TAMM



There are many Mobitex applications for different user groups. The system was designed for data, which means that it is very stable and highly reliable. One user group are police officers in the US, for example, who demand extremely high security.



Peter Gavigan

## WHAT IS MOBITEX?

Mobitex is a narrowband wireless system for transmission of packet data based on open standards. The system is robust and highly reliable and is particularly suitable for business-critical applications. There are more than one million Mobitex users.

Mobitex gives users constant access to such applications as e-mail services, stock trading, news via WAP and information from various databases.

Mobitex is also ideal for rescue-related services, transport and logistics services, telemetry and credit-card verification.

Organizationally, Mobitex operations are part of Special Products, which in turn is part of the Global Services business unit. Anders Baaz is manager for the Mobitex unit, located in Gothenburg, where some

140 employees are responsible for both technical and business development for Mobitex. About 20 persons at local Ericsson companies work with Mobitex.

The base stations for Mobitex are manufactured at Ericsson's plant in Nynäshamn, Sweden, while the plant in Katrineholm produces some modems.

# Ericsson makes KingCom a king

IP based services will soon be offered by the innovative southern Italian operator, KingCom – as the result of the company's successful cooperation with Ericsson.

"The future definitely belongs to IP," says Carlo Siciliano, head of IT at KingCom.

When combined telecom and ISP operator, KingCom, decided to switch from traditional narrow band to broadband, it chose Ericsson.

Carlo Siciliano, the company's IT manager, says that the Ericsson solution was the one that best matched his company's requirements of reliability, availability and service.

"The main reason for our choice was that Ericsson's IP networks are truly designed for operators who want to bring value added services to the market," he says, confidently.

As soon as KingCom began operating, just after the liberalization of the Italian telecom market in 1999, the operator made plans to start offering IP-based data and telecom traffic as soon as possible.

"We want to be an operator that looks to the future and is ahead of its time – that is why we chose IP," explains Carlo Siciliano.

Apart from regular data and telecom traffic, the company plans to focus on VPN (Virtual Private Networks), videoconferencing and security services.

"This could be, for example, remote monitoring of an office," says Carlo Siciliano.

Apart from its innovative strategy, KingCom is unique



KingCom's Public Ethernet solution was compiled here, at Ericsson Italy.

among operators in its decision to focus completely on southern Italy. The area in question consists of the four southernmost regions of the boot. The city of Salerno is first in line.

"We want our customers to discover, by using these services, that the Internet is not a slow, cumbersome business – in fact quite the contrary," says Carlo Siciliano.

So how much interest have KingCom's services actually inspired?

"A great deal. IP-based data is the solution of the future. Just think: In Salerno, we had 1,000 customers sign on in a few weeks, well before the network was ready.

The timeline? The network is being installed in Salerno and the installation is scheduled to be complete in quarter three. KingCom expects that by year-end 2003 they will have several thousand customers in Salerno, including large companies, small businesses and households.

"But we're not stopping there. We are counting on this business growing for several more years," Carlo Siciliano says.

ELIN DUNAS  
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Andrea Penza, head of the New Operators customer unit, Donatella Caggiati (product manager) and Stefano Balveti (account manager) with Ericsson in Rome: after working with KingCom, they consider themselves pioneers.

## "KingCom's success is our success"

According to Tommy Svensson, responsible of business management for Italy and Iberia, Italy has great potential.

"There is enormous potential in Italy even if the market has slowed down there as it has elsewhere. It seems that there is space for regional, and not only nation-wide, operators," he says.

And Ethernet is truly the future. "I am convinced that this is a key solution for the future, and that Ericsson will be a leader in the Public Ethernet area", concludes Andrea Penza.

He is accompanied by Donatella Caggiati, head of Ethernet-based production, and Stefano Balveti, account manager. They all agree that the transition from narrowband to true broadband is exciting.

"It's fun to be a part of this project and help KingCom break new ground. We are doing our best to support them in being successful", says Stefano Balveti.

Donatella Caggiati describes Ericsson's Ethernet solutions as innovative, flexible and – key point – extremely reliable.

Ericsson will help KingCom bring IP based services such as, high-speed Internet, voice over IP and videoconferencing to market as soon as the network is up and running. KingCom also hopes to offer other services such as telemedicine, tele-learning and tele-banking.

Andrea Penza explains that Ericsson is also working with various third-party suppliers when it comes to applications.

"I imagine the range of services available will grow from year to year," he adds.

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Tommy Svensson

ELIN DUNAS

### ERICSSON'S PORTFOLIO

Ericsson's Public Ethernet Portfolio contains three solutions:

- Fiber Ethernet Home and Business Access
- Fiber Ethernet Metro Access
- Ethernet DSL Access

## Public Ethernet is cost effective

Why is Ethernet a good solution for network operators? Stefano Alvaro, business manager at Business Unit Mobile Systems, for new operators in Italy and Iberia gives an explanation

One of the key issues facing network operators today as they move towards advanced, multi-service networks is the cost-effective deployment of a broadband access network. Ethernet is emerging as a leading access technology standard – because of its simplicity and cost-effectiveness – and, as a consequence, Public Ethernet solutions are increasingly being seen as the ideal access solutions, he says.

According to Stefano Alvaro, Ericsson has one of the most comprehensive offerings for operators building broadband access systems.

And with its wide experience of deploying large multi-service networks, an unrivalled global and local presence and support, an end-to-end product portfolio and partnerships with some of the world's leading software and hardware developers, Ericsson is the ideal development partner for this rapidly expanding public Ethernet market, says Stefano Alvaro.

ELIN DUNAS

### ETHERNET – HOW IT WORKS

- Created in 1972, Ethernet is currently the most common, fastest and least expensive technology for LANs (local area networks) and WANs (wide area networks).
- Ethernet is a proven technology that supports transmission speeds of 10 Mbit per second up to 10 Gbit per second, in both directions (full duplex).
- The technology can also be used for virtual LANs

and wireless LANs – "W-LANs." It is also used for residential broadband connections, in competition with cable-TV and LMDS (radio link to multiple receivers) and satellite.

- With Ethernet, capacity is shared by all subscribers, but it is also possible to construct "switched networks" that provide guaranteed capacity to all users.

### THE KINGCOM PROJECT

KingCom is an alternative telecom/ISP operating in southern Italy (Puglia, Campania, Basilicata and Calabria.)

Ericsson has been the company's sole supplier since it started in 1999.

The company is currently involved in a joint project with Ericsson to supply KingCom's customers in Salerno with services by Ethernet – first, high-speed Internet, videoconferencing, VPN, security services and voice over IP; later, more advanced IP-based services.

KingCom is expecting to have 4,000 customers in the city by year-end 2002, including large companies, small businesses and households.

KingCom also plan on extending to other cities in southern Italy.



KingCom's logotype.

## THE ERICSSON RATIONAL USER CONFERENCE - ERUC

# 2002

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# Create wireless solutions

## with Nera microwave radio

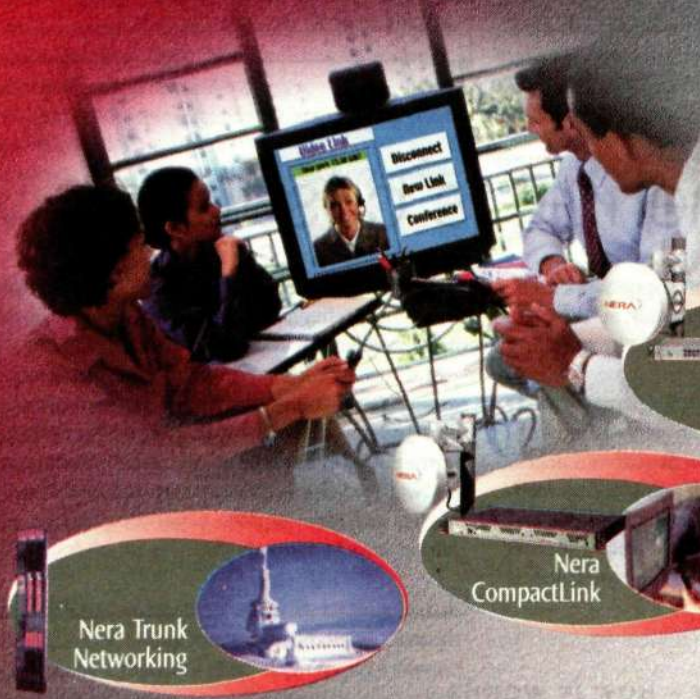
Nera Networks develop, manufacture and install microwave radio solutions for trunk, mobile and fixed wireless systems for telecommunications and digital TV networks throughout the world.

As well as being the fastest way to establish networks, Nera CityLink, Nera CompactLink and Nera Trunk Networking are the most cost-effective alternatives to cable or fibre based networks. They are secure, easy to maintain and eliminate all the problems associated with excavation for cables.

Nera microwave radio is the perfect solution for building and upgrading the network infrastructure necessary to support the transition to UMTS/3G services, whilst making high capacity internet, e-business, video conferencing and digital TV broadband access available to everyone.

Nera's systems are designed to bring working people inside and outside the office together, with innovative solutions that bridge the gaps between land-based, cellular and computing networks.

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# NERA

enabling a wireless future



The Karlín district of Prague was one of the worst hit areas. Because the floodwaters have undermined buildings, the district has been cordoned off.

PHOTO: FACELLY/SIPA/SCANPIX

## Prague office flooded

All Ericsson employees in Prague have been forced to find new premises in which to work following the floods that hit central Europe recently. The Ericsson's offices are located in Karlín, perhaps the worst hit area.

Since the offices are situated on the third and fourth floors, they escaped the three-meter floodwaters. However, the area remains sealed off as the ground is so saturated that three buildings have already collapsed.

"Our building has been examined and found free of structural damage," says Bo Hildingsson, head of Ericsson in the Czech and Slovak Republics.

The crisis group is planning for the employees to remain in temporary locations for a month. They will move to the Bratislava office in Slovakia and to the premises of the customer Oskar Mobile. Getting the invoicing and IS/IT systems working are the highest priorities.

"A few of the employees experienced damages to their homes, but from what we understand, the damages were limited," explains Bo Hildingsson.

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Tournament victor Sergio Garcia, host Rod Black and head of Ericsson in Canada Mark Henderson

PHOTO: GORDIE BALL

## Ericsson sponsors golf-loving Canadians

Ericsson has hosted Canada's most popular golf tournament, TELUS Skins, since 1998. This year, hundreds of golf enthusiasts took the opportunity to have scores and interviews transmitted directly to their phones through Ericsson's SkinsLive application. During three days, more than 16,000 page views were registered. The service was open for all users with data subscriptions on any of Canada's four leading wireless carriers.

The service was available to all subscribers of Canada's four largest mobile operators.

## Professional customer reception in Borås

Transmission and Transport Networks' supply unit in the Swedish town of Borås, which is the world's largest microwave-radio production unit, has become even more professional in its reception of customers. Its PowerPoint presentation and tour are customized for each visit and eight guides are being trained internally. In each department, local information boards provide in-depth information.

## new assignments

Hans Nyqvist becomes country manager of in Jamaica and key account manager for C&W Panama and the Caribbean, effective September 1.



Hans Nyqvist

Bo Andersson is the new president of Ericsson Micro Components AB.

Carl Brooling has been appointed vice president and head of the Operations and Human Resources function within Ericsson Enterprise AB. He is presently heading Resource and Competence Management within corporate function People and Culture.



## from the archives

In the summer of 1967, telephone-dial sunglasses hit the fashion scene. According to *Contact's* reporter, they were an instant success in Miami. Maybe something for LME to add to its product catalogue?

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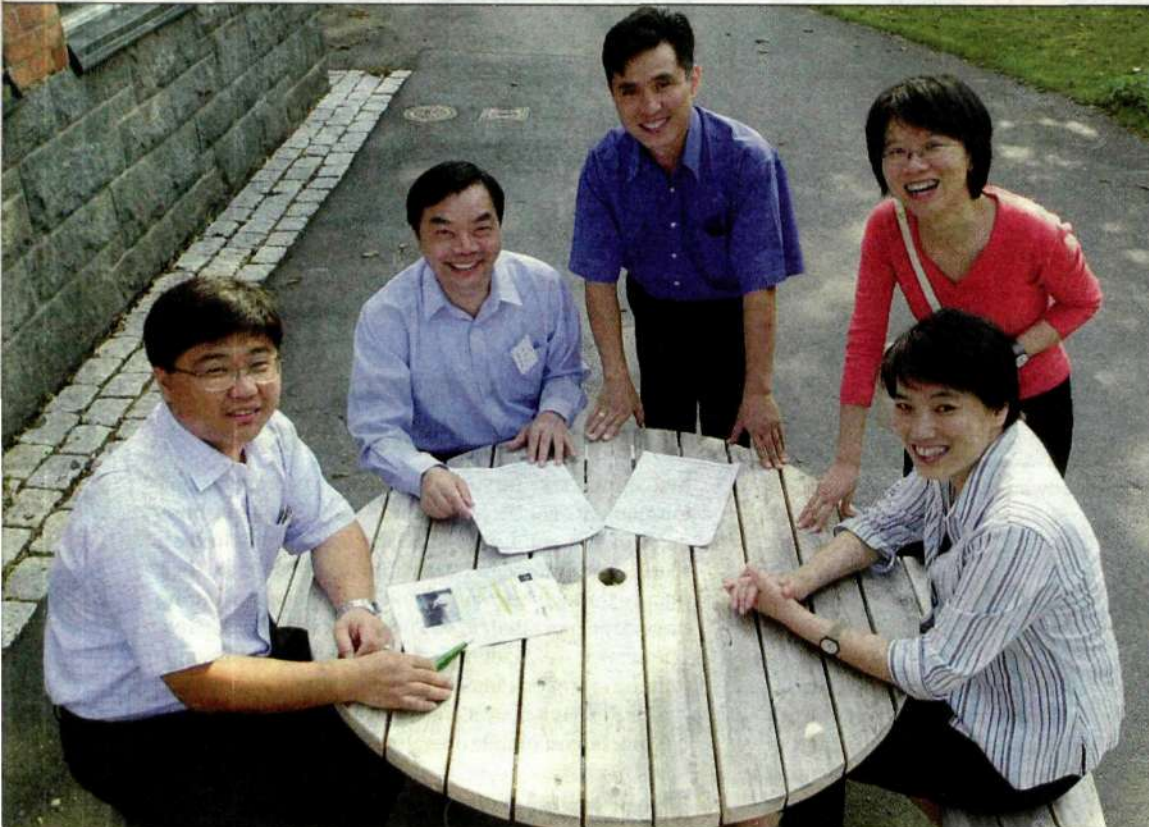
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Song Ke, Ericsson in China, Zhao Jidong, China Netcom, Tony Fang, Stockholm University, Wu Hui and Joyce Ma, both of Ericsson in China, felt that the program provided many opportunities to 'network' and share experiences.

PHOTO: ECKE KÜLLER

# Building networks at summer school

An interesting and rewarding program with good lecturers and numerous opportunities to exchange ideas and make contacts – that was how participants of Ericsson China Academy Summer School 2002 summed up "Riding the Waves of Global Telecom". The one-week program, attended by more than 30 participants, was held in mid-August at the Stockholm University School of Business.

"This is the first time that Ericsson China Academy organized a program of this nature," explains Joyce Ma, general manager of Ericsson China Academy, which is located at Ericsson in Beijing. Participants came from Ericsson in China as well as the country's four largest operators.

The goal behind the one-week program was to improve participants' understanding of how they can successfully oversee their operations in today's rapidly changing, global telecom industry.

The program was conducted in conjunction with Sweden Asia Business Education Center (SABEC) at Stockholm University.

"For us, this is a very important event since Ericsson is our largest client," says Tony Fang, head of SABEC.

Subjects discussed during the program included globalization, business strategies and marketing, consumer trends within the telecom industry and financial strategies for telecom companies. One of the days was devoted to Telia.

Li Mofang, who is executive vice president and chief officer of technology at China Mobile, feels

that it was a very interesting program with significant opportunities to exchange experiences. She felt that the "Telia day" was especially rewarding.

"Several of the participants are my competitors back home in China, but here we are all 'students' and can share valuable experiences. Ericsson's idea of organizing a joint program for both operators and suppliers has proven highly rewarding," she says.

"Since the program lasted an entire week – which is costly from an employment perspective – it is important that participants get as much out of it as possible, and we believe that they have done so. Hopefully, we can organize a similar summer program another year," says Joyce Ma.

In addition to lectures, seminars and discussions, there was also time for some social activities including canoeing, swimming and a traditional Swedish crayfish party.

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column

LARS-GÖRAN HEDIN  
corporate editor

## A week without my mobile phone

It's been fourteen years, I think, since I acquired my first mobile phone. It was a Danish monstrosity that weighed four kilograms and occupied virtually my entire reporter bag. A couple of years later, I started working at Ericsson and, to my surprise, received a hot-line phone that could actually fit into a larger pocket. That telephone was the start of twelve years of slavery.

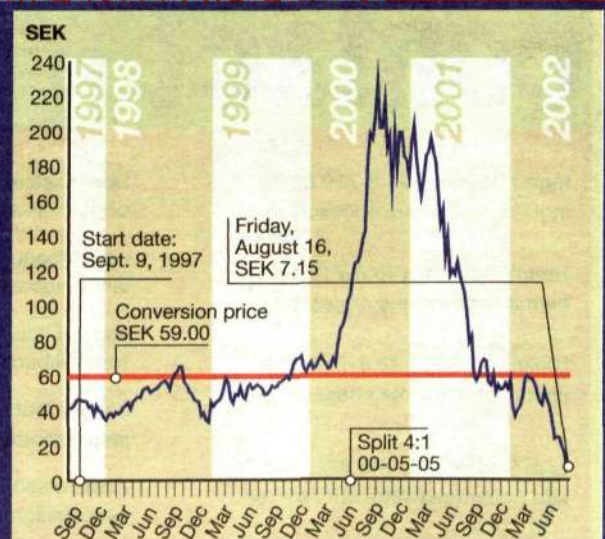
It took until August 2002 before I came to realize that, over the years, I had actually become a slave to my mobile phone. That I no longer feel fully dressed without having it in my pocket and that I experience anxiety knowing I've forgotten it at home on the desk. It took a week-long hiking trip in the Swedish mountains to come to this realization. A week of both physical and psychological challenges.

My psychological challenges began when – after only a couple hours of hiking – I was faced with the fact that signals from the radio base station at the wilderness outpost in Kvikkjokk could no longer reach me. My R310 was unusable for the next several days. My reaction to this realization was immediate, and my anxiety grew with each step I took. How would I now keep tabs on work, family and friends? Off and on I thought that I could hear ringing sounds coming from my backpack and I would fumble to locate the phone, which was always just as dead as ever ...

With time, however, my anxiety diminished and those phantom ringing sounds disappeared. Instead, I turned my attention to the fantastic nature surrounding me and my son, who accompanied me on the trek. I developed a sense of freedom – it was actually nice to get away from all those telephone calls.

After a week of trekking on foot and tired after a long day of strenuous climbing up and down mountain slopes and glaciers, we arrived at Sulitelma, Norway where we abruptly returned to the normal order of things. A notice board, with the phone number to the local taxi station, saved us from yet another ten kilometers of walking. Even though all our gear was soaked from several days of rain, the mobile phone naturally still worked. Forget everything I said about slavery – GSM signaled deliverance for weary hikers. Even the "automatic" SMS advertisements from Telenor were appreciated.

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<http://inside.ericsson.se/convertibles>