

NEWS

Telub[®]

TELUB STAFF MAGAZINE No 1 APRIL 1989

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Teacher Børge Nielsen with his students (and service technicians to be) at the Kungsmad School in Växjö. Together with Telub Service, the school is improving its level of technical education, for students and teachers alike.

We take bigger bites



The Business Area Service has been active on international markets for some fifteen years now, and during this time there have been periods of success as well as disappointments.

1988 was a prosperous year with healthy sales growth and a remarkable rise in profits. In addition, we hope that there acquisitions toward the end of the year will create a platform for further expansion during coming year.

Newly acquired companies often experience a performance slow-down right after a take-over, and Telub Bitronic was no exception in its early days with the Business Area Service. A strong and decisive management team turned things around and its first fiscal year within Service was most satisfactory with high growth and dramatically increased profits.

Telub Service Oy in Finland has doubled its size over the last two years and become an important factor on

the Finnish independent service market.

The healthy recovery of the Norwegian operation and the restructuring of Telub Service A/S (Denmark) reinforces the positive picture.

A record year for Telub Service (Sweden) tops off this image of success, but we know that the margin between success and failure is very thin in our kind of business.

1989 will be a tougher year in many respects and the ambitious budget figures we have set out won't be achieved without a lot of hard and creative work on the market and a continuous willingness to improve efficiency in production and inventory control.

When we have reached our internal goals in these important areas, our ability to take a bigger bite of the international service venture market will be greatly improved.

Göran Stenudd

Göran Stenudd is head of the business area Computer Service, one of Telub's five business areas. He is managing director of the Swedish company Telub Service AB, with headquarters in Växjö and chairman of the board of Telub Service's Nordic companies as well as Telub Bitronic GmbH in West Germany.

TELUB NEWS

Telub News is a newsletter for the Telub Group's employees as well as other interested in our business. It appears three times a year with Managing Director Staffan Håkansson as publisher.

The newsletter's contact person is Anita Björilin, who can be reached at -46.(0)470 420 00. Telub News is produced by Telub Inforum.

We are the Telub Group

The Telub Group is one of the largest consulting and technical companies in the Nordic area. The Group has around 2.000 employees and annual revenues of around SEK 1 billion. Headquarters is in Växjö.

The Telub Group has five main business areas: Technical services and systems for defense and public administration through Telub Teknik in Sweden and Telub Teknisk in Norway.

Technical information through Telub Inforum in Sweden and Nor-

way, Industriell Dokumentasjon in Norway, SPS Technical Ltd and Industrial Artists Ltd in Great Britain.

Third party service through Telub Service in Sweden, Norway, Denmark, Finland and Telub Bitronic in West Germany.

Data processing technology and data communications through Owell and Opiab.

Technical services and systems for industry and other commercial markets through Telub Industri and Telub Security Systems.

Computers keep a union happy

In Sweden, keeping the powerful unions happy is no joking matter. For Telub Service, this is a double task, because unions can be challenging customers as well as wage negotiating partners.

Sweden's Commercial Employees Federation, whose 160,000 members work in a wide range of retailing jobs, clearly needed a decentralized computer network to run its internal affairs. At the same time, it had no small proportion of "computer shy" members who had experienced the inept installation of computerized cash registers and other "gadgets."

Siemens Data was awarded the Commercial Employees' contract to deliver 400 terminals to 31 union locals across Sweden, so that locals could computerize their own administration as well as communicate with the mainframe computer at union headquarters in Malmö.

It was immediately apparent to Siemens that it couldn't do the whole job alone. "To build up a nationwide service and installation network would be uneconomical," says Len-

nart Flygare, the project manager at Siemens. Instead, a total solution was packaged together with Telub Service, who undertook installation and service of the Siemens network.

"Localized service and our connection to the union's mainframe gives the locals just the support they need," says Tommy Quarfort, who manages the computerization project from union headquarters. The union official admits that it took some well-considered internal training to get the union locals to accept and use the terminals. "No one was forced to take one," he adds.

The project is now beginning to bear fruit. Even some of the most "computer shy" union officials are starting to find they prefer word processing to typing, and it is the start, for them, of a positive relationship with the computer.

Telub finds missing click

The 1986 murder of the Swedish Prime Minister and international statesman Olof Palme is still unsolved. Like the Kennedy assassination in the U.S., the mystery of who killed Mr. Palme has sparked a wide range of theories and speculation.

One theory that had to be tested because of its controversial implications was that the Swedish police had manipulated an audio tape of the emergency calls the night that the Prime Minister was shot. Proponents of this theory claimed that a timing "click" inserted automatically on the recording of all emergency calls had vanished, suggesting the tape from the fateful night had been tampered with.

Thanks, in part, to Telub Teknik's recording experts, it has now been determined that it is unlikely the tape was altered. Since the "tampered tape" theory could implicate someone in the police, it was necessary to have copies for technical analysis made by an impartial party.

"To start with, we made a number of working copies that would be used in the analysis. This was possible because we had a recorder consisting of two 36 track decks with separate record and play heads, of the same type used by the emergency call center," says Sven Dahlström of Telub in Arboga, where the copies were made.

The copies were then sent to Swedish signals intelligence specialists, who determined that the slightly different positions of various recording heads caused a "phase shift" in the placement of the timing "click". A comparison of Telub's copies, test tapes from the emergency call center, and the controversial "Palme tape" showed that all channels on the tapes had been recorded at the same time and that there was, indeed, a timing click at the right place.



Tommy Quarfort at the Commercial Employees' Federation is responsible for the decentralized computerization of the entire organization with help from Siemens Data and Telub Service.

Tomorrow's technical professionals

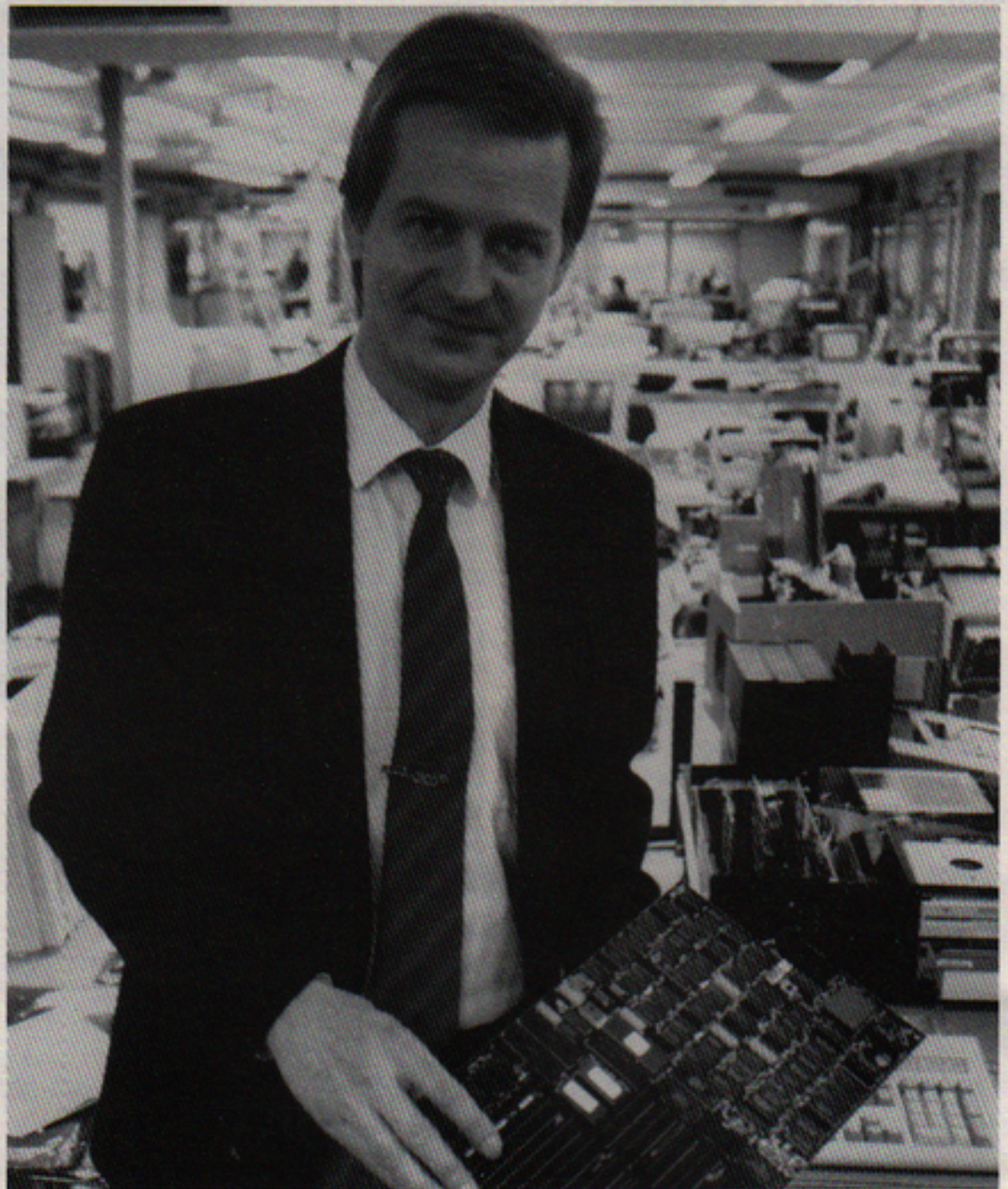
If you have a school near an airport, you probably will find that more students chose aviation or travel related careers. The reality is there every day—airliners lifting off for distant lands, mechanics working in maintenance hangars, and air crew members passing through the neighborhood. It would be perfectly logical for the school to have some courses to help students with careers in which they gain a natural interest.

The same is true in small-town Sweden. If you put one of the largest independent computer repair operations near a technical high school, both places will get curious about each other. That's exactly what happened with Telub Service's Repair Center in Växjö and the Kungsmad School.

Börge Nielsen, a teacher at Kungsmad, has been pushing for years to upgrade the technical education curriculum. Something had to be done to improve the two-year, so-called "telecommunications repairman" curriculum to produce graduates whose skills were in line with market demands.

The "market", figuratively speaking, was down the block, at Rolf Karlsson's Repair Center, where computer equipment from both domestic and foreign customers is received for servicing. About 15,000 pieces of equipment pass through Växjö each year. Technicians have to be "fluent" in a wide variety of brands, since Telub's operation is independent of any specific suppliers. For the same reason, Repair Center has to be able to compete favorably with the suppliers' own repair and service operations.

Börge and Rolf have been looking at each other's needs and capabilities, with the result that Kungsmad's technical curriculum has moved a step closer to the 21st century. The old two-year technician course has been expanded to three-years training in "Industrial Technology". Part of the course is hands on experience with



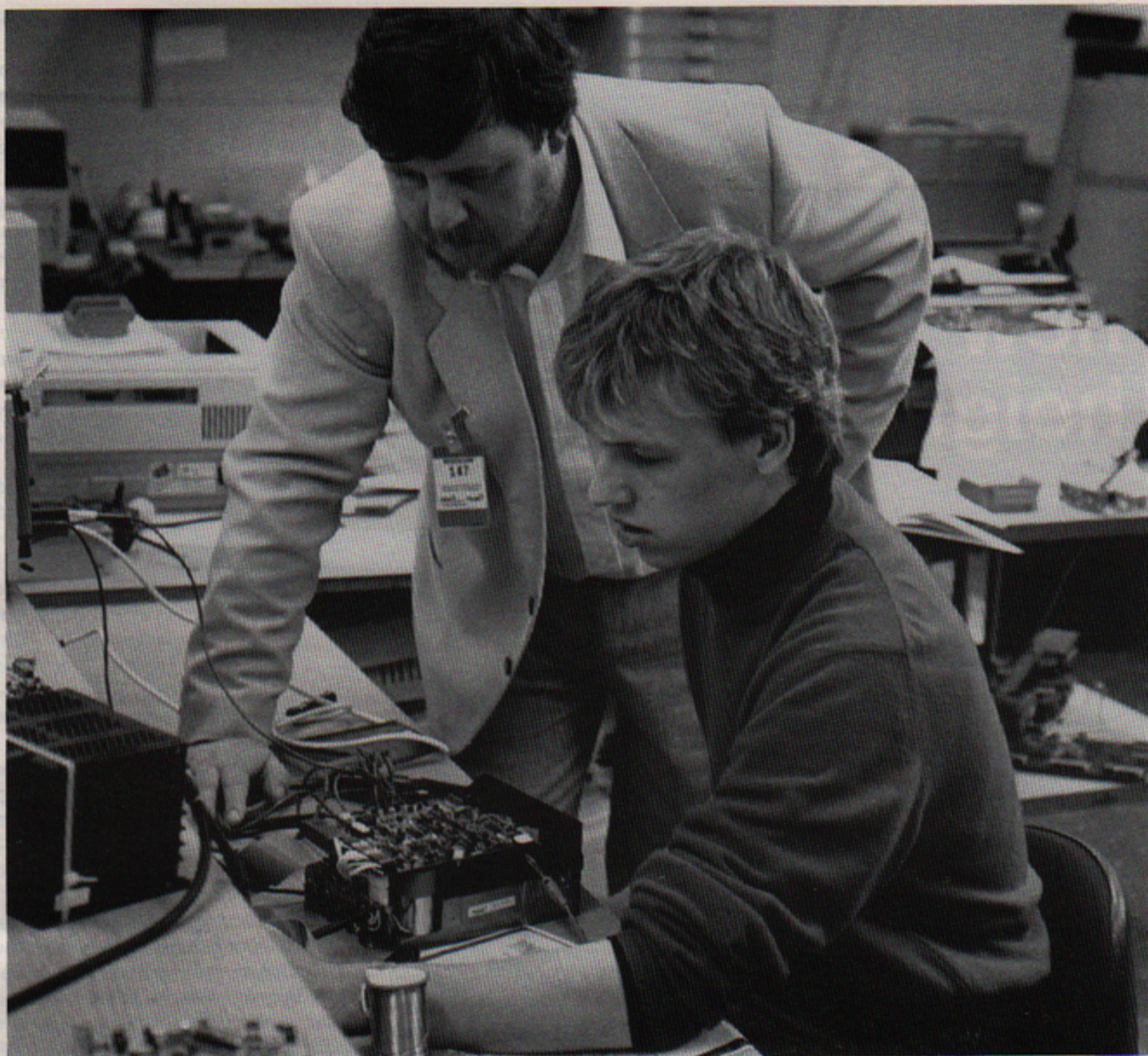
Repair Center was started to meet the needs of the Swedish Defence Forces, but it quickly became apparent that technical skills were in demand on the civilian market. A new business idea was born. Now, some 15,000 units are repaired each year for customers across Europe.

Telub, with students training at the Växjö workshop as well as going along on field service missions.

Rolf Karlsson thinks the latter is just as important in the "real world" as knowing how to troubleshoot a wide range of hardware. "The most important thing is to learn what we mean by good customer relations. This kind of competence is a golden value anywhere," he says.

"I think we have the best trai-

ning for computer service technicians in the country," say Börge, giving credit to the cooperation with Telub Service. At the same time, he notes there is difficulty finding qualified teachers. But here, as well, the school authorities and Telub are discussing how to set up a program of continuing education for teaching staff. A number of technical schools across Sweden have already begun send teachers to Telub's facilities in Växjö for training.



Teacher Börge Nielsen with his students (and service technicians to be) at the Kungsmad School in Växjö. Together with Telub Service, the school is improving its level of technical education, for students and teachers alike.

Telub Service continues to expand thanks to new acquisitions

Telub Service's latest acquisitions include MAI Information System AB of Sweden and MAI Basic Four A/S of Norway. Telub Service thereby takes charge of some 15 employees in Sweden and nine in Norway, plus a large number of service agreements.

Telub Service AB has also taken over the service business of Recognition Equipment AB outside the Stockholm area, effective January 1, 1989.

The business consists of a num-

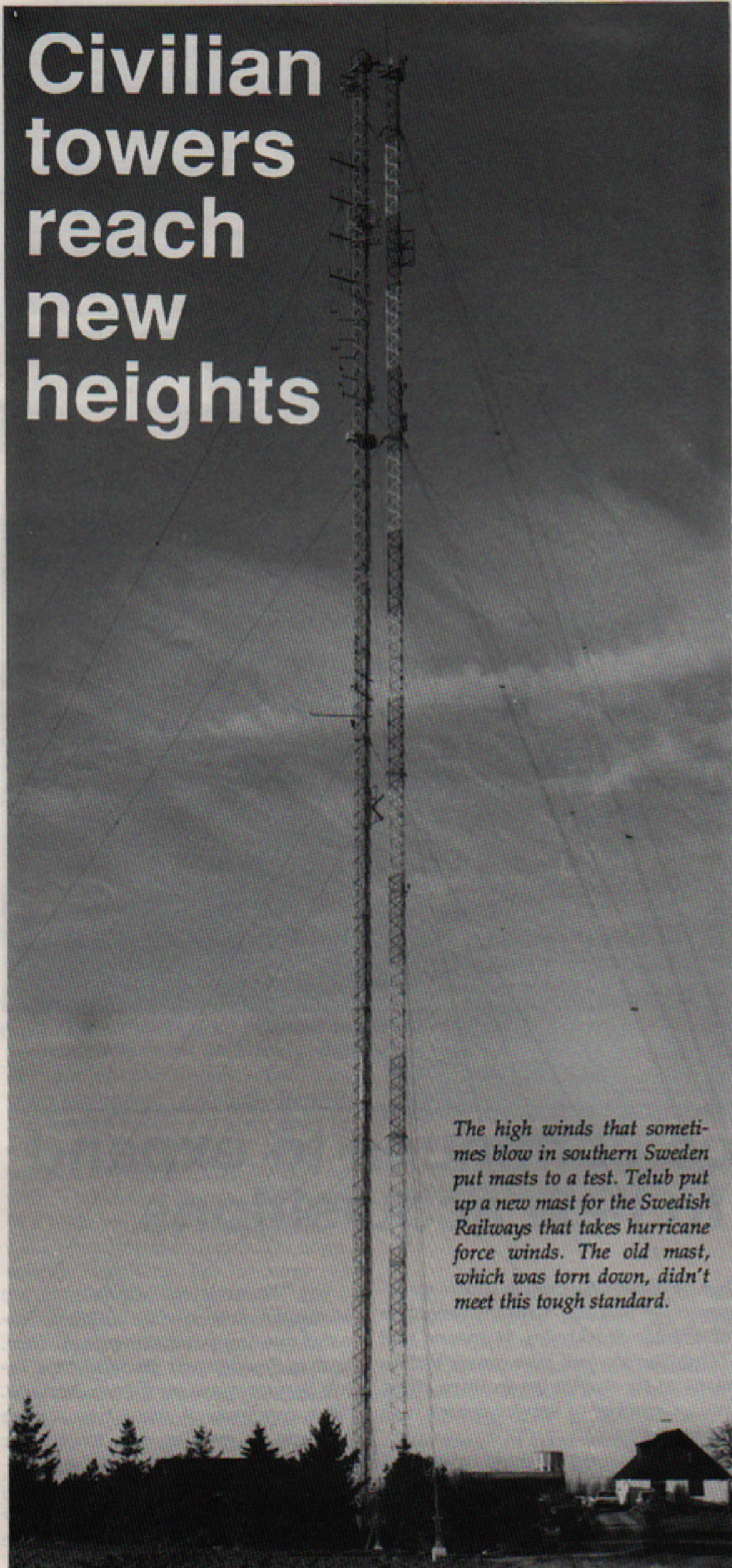
ber of corporate service contracts across all of Sweden, with the exception of greater Stockholm. It means that Telub Service will take on six technicians as its employees in three cities, plus a number of service contracts in other areas.

Customers include minicomputer users at Ericsson Radio Systems, Saab-Scania, and Electrolux, to mention some of the better-known companies.

"These latest acquisitions are consistent with our ambition to expand our computer service activities, both in Sweden and abroad," says Telub Service manager Göran Stenudd. "The purchase of these two service operations enables us to further strengthen our market position."

With these latest acquisitions, Telub Service's combined turnover amounts to over 200 million SEK. The company employs some 350 people.

Civilian towers reach new heights



The high winds that sometimes blow in southern Sweden put masts to a test. Telub put up a new mast for the Swedish Railways that takes hurricane force winds. The old mast, which was torn down, didn't meet this tough standard.

Göran Eriksson's business is reaching new heights. Honestly!

With Swedish business booming, anyone can say that, but Göran of the Sector Communication Systems in Arboga is talking about telecommunications towers. Tall ones.

Telub Teknik has been putting up and servicing military communications masts for years, but the "new heights" are being reached for civilian customers and purposes.

It recently completed a 100 meter mast for the Swedish Railways in Trelleborg, where it can beam microwave communications to the railway authorities in the German Democratic Republic.

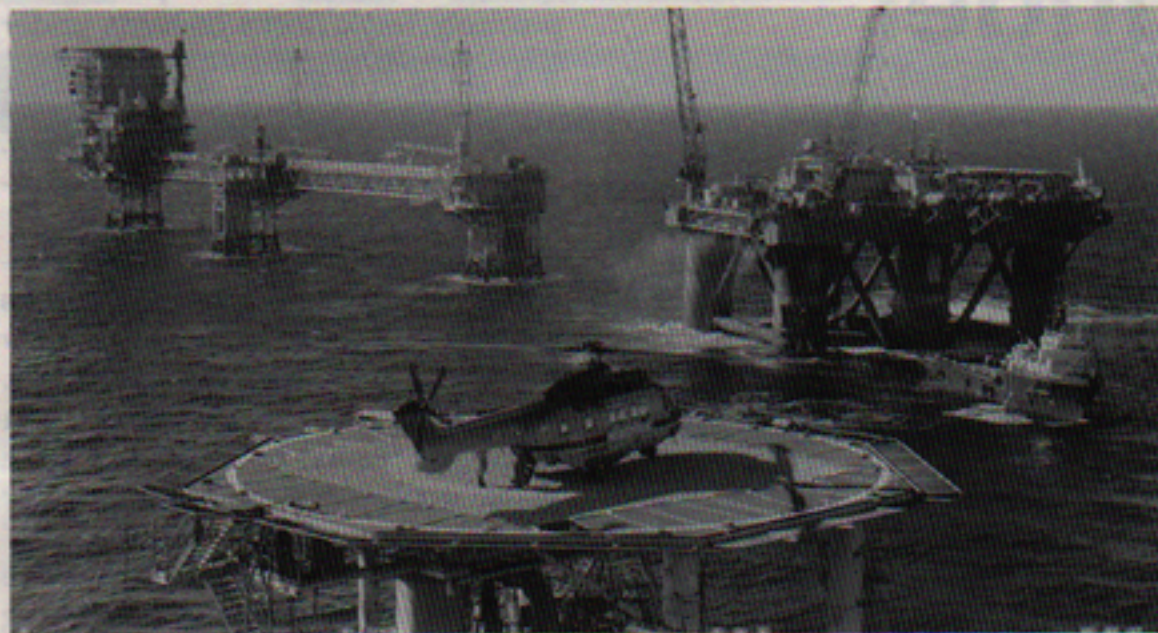
The new mast replaced an old tower which, technicians thought, had a somewhat higher chance of "dropping in" on the local surroundings should there be a violent storm. To be sure, this almost never happens, but the new mast is guaranteed to withstand the most intense hurricane winds ever recorded in Sweden—something that happens about once every 50 years.

The new Trelleborg mast was manufactured in Norway and put up by a crew led by Ingvar Henriksson from Arboga. It is held in place by 12 guy wires and is guaranteed to stand even if a wire breaks.

Besides the Swedish Railways, the Trelleborg mast will serve the Coast Guard, police, Telecommunications Board, a nearby naval base and other authorities. In fact, there are probably more non-military communications networks that are more important to society on a day-to-day basis than the military tower network that one hopes won't ever be needed.

News of a job well done spreads quickly. "As a side effect of this deal, we gained the trust of the Swedish Railways Gävle district to deliver and set up a 30 meter mast in Storlien (a ski resort). Our ability to make quick deliveries contributed to us getting the order. The mast had to be put up two weeks after we got the order. It was a rush to complete the work before the first snowfall, and we did it," Göran tells, "We also have a good chance of getting an order from (the power utility) Sydkraft for nine 50 meter masts for their data communications, mobile radio and remote control networks...So I think I have good reason to say that our civilian masts are reaching new heights."

"James Bond" training for Danish service techs



First, you put out a roaring, 40-meter high fireball from a gas leak.

Then you re-start the engine on a free-falling helicopter.

Finally, you plunge fully clothed into a tank of ice water and inflate a liferaft.

Done?

OK. You get the job. No, it's not a James Bond rehearsal, nor an endurance test for getting your Special Air Service wings. In fact, it's all in the company. You can replace Finn, Jørgen, or Søren when they go on vacation.

The three guys work for Telub Service A/S in Denmark (not on the set of a kung-fu adventure film in Hong Kong). And, like many of our readers, they spend their days checking the insides of a Digital PDP 11, a MicroVAX, or some other state-of-the-art computer.

So have we hired some good technicians who happen to be crazy when it comes to hobbies? No, we are talking about a job here, a job with Maersk Olie og Gas A/S that's part of Telub Service's contract for Digital computer equipment that happens to be installed on some North Sea oil platforms.

9,999 times out of 10,000, guys like Finn Sjeltoft, Jørgen Nielsen, and Søren Ollerup do nothing more exciting than pulling circuit boards and running diagnostic routines. But out on the offshore fields, things sometimes go wrong. Telub likes to keep

good employees healthy, and Maersk requires strict safety rules to be followed. No one goes out on a platform without having completed a survival course. That's where you deal with the fireball, the helicopter, and more mundane things like swimming, first aid and safety gear.

"Safety on the platforms is rigorous," says Jørgen, "You have to know your way around in case you get evacuated quickly. The safety measures include getting written permission describing exactly the kind of work to be done, where it will be done, and the estimated time it will take. All for safety reasons."

"The work itself is the same as for any ordinary customer, if you exclude the fact that one of the platform's technicians is always present to supervise. But they are well trained and often help out," he continues, "Under normal conditions, everything is fine on a platform. There's good food and plenty of cake to get fat on."

Do busy Telub people have time to loaf and eat? On the platforms, sometimes technicians are rushed in to handle an acute problem, only to remain aboard for a day or two while waiting for space on a helicopter. When something has gone wrong, Telub gets top priority, but not on the return flight.

It's no surprise that technicians, like ambulance doctors, keep emergency bags packed and ready. But instead of parts and tools—which go

along without saying—the bags contain personal clothing, toothbrushes, and reading material, just in case. Back at the service offices at Glostrup or Vejle, Denmark, it is a sin to mix up these bags.

More often than not, the teams don't rush off like ambulance drivers because they can see a problem coming. The platforms maintain a communications link with Glostrup via a satellite (in stationary orbit over Brazil) that enables a considerable amount of trouble shooting via terminal.

Göran Johansson, the head of Telub Services Denmark, is proud to say that Telub got the Maersk contract because of its reputation. Word had spread from the Norwegian gas and oil fields that Telub was serving DEC equipment up there. "We worked out an offer based on the special circumstances involved, by which I mean the unpredictable time factor," he says.

With some pride, Göran adds that "Digital in Denmark was also bidding, but we got the deal."



Finn Sjeltoft dresses in a survival suit before going off to service computers on North Sea platforms.

Telub's electronic birdwatching down under



From sunny Växjö to the freezing Antarctic—this 1950s military radar is serving peaceful purposes as a "old veteran" and will be doing work at remote latitudes. Bengt Olof Nygren, Curt Persson, and Kenneth Svensson, standing at the foot of the radar, have rebuilt the equipment to serve bird researchers Gudmundur Gudmundsson and Thomas Alerstam. The "bird men" are off to the Antarctic to study sea birds.

By the time you read this, a expedition with a strange cast of characters and equipment will be under way.

It involves Thomas the "bird man", the Telub company logo, and a radar that saw its "glory days" when Elvis was the King of rock and roll.

By the early spring of 1989, Sweden's first South Polar expedition, aboard the *Stena Arctica*, was in Antarctic waters, carrying, among other things, the old fire-control radar adapted by Telub Teknik for use in bird research.

Thomas Alerstam, the "bird man" from the University of Lund, has been using the old 1950s Swedish airforce portable fire control radar for bird studies since 1978. Built to locate stray Migs and Starfighters, the old

"war horse" has been rebuilt and equipped by Telub Teknik since the early 1980s to distinguish starlings from seagulls.

Telub has borne a part of the costs of adapting and maintaining Thomas "bird radar". The adaption of the radar for bird studies, including the latest servicing and upgrade before it was loaded aboard the *Stena Arctica*, is a kind of sponsoring of scientific research and polar exploration by Telub. That's why the company logo has been attached to the unit, which will be mounted on the highest point of the ship during the voyage.

Curt Persson and Kenneth Svensson of the Radar Division in Växjö gave the "electronic bird watcher" its most recent servicing ahead of its most important scientific mis-

sion. This meant preparing the equipment for operations from Antarctic cold to Equatorial heat, since Thomas plans to operate it all the way back when the research sails home.

Telub's radar and computer specialists have made it possible to precisely track flocks of birds under any weather and lighting conditions and to determine the species of bird by measuring its wing beat frequency. They also attached a computer for recording and interpreting data.

"This gives us a unique possibility to track otherwise invisible flocks of birds. Many species fly so high they can't be observed by the naked eye. Now I intend to study various sea birds, especially how they behave under the extreme wind and weather conditions prevalent in the Antarctic," Thomas explains, "We will also be there when the birds have their young and will be able to follow them as they search for food at sea and observe how they navigate."

Feedback welcome

Last year was quite a year! We had to write about all kinds of things, including multi-million dollar orders, corporate acquisitions, submarine projects, seminars, prominent visitors to company headquarters, and a lot else. On top of that, it was our 25th anniversary and the start of Telub Futurum. It sounds like a lot, but maybe we've missed something.

Have we paid enough attention to the individual? Has there been some important company issue that should have been discussed? Has someone got something critical and unconventional to say? Does someone want to praise us or someone else? Have we covered too much of one subject or another?

Most of all, have we done enough to capture the interest of you, who mainly read us in English?

We're sure you have a point of view, so don't hesitate to write us about it. Give us an idea of what you want to read about in these pages. After all, this newsletter is meant for you.